

MOTOR AGE

Vol. IV. No. 18

OCTOBER 29, 1903

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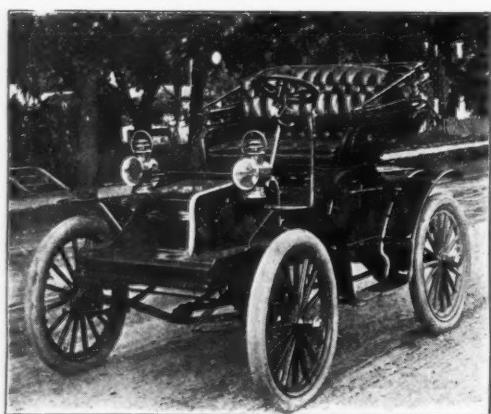


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The phenomenal conditions of storm and flood put the underhung air-cooled motor at the greatest possible disadvantage. Motors, Mufflers, coils and batteries were repeatedly submerged. Bridges were carried away, making long detours over mountains necessary and causing unavoidable delays. Most of the delays were made up during the latter part of the run and

All Three Cars Reached Pittsburg Without the
Breakage of Any Part Except Chain Struts

KNOX AUTOMOBILE CO., SPRINGFIELD, MASS., U. S. A.

Member of Association of Licensed Automobile Manufacturers.

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\$2.00 Per Year.

SHALL THE CLANS GATHER AT THE ST. LOUIS WORLD'S FAIR?



GREAT national encampment of automobiles in St. Louis next year. Not an endurance run of the manufacturers or a tour of any particular club or organization, but a gathering of cars reaching the exposition city under their own power, from all points of the United States—from San Francisco and New York; from New Orleans and Portland, Me.—an assemblage of machines such as has never been seen before in the history of the self-propelled vehicles; a conclave of motorists that would astound the motor hating legislatures; a mighty host that would mark the eventual retirement of the horse; an object lesson in the greatness of motoring, and a thundering of motors that would be heard in effect from one end of the world to the other.

Such is the character of the big automobile event of 1904, which MOTOR AGE suggests for the consideration of the industry and of automobilists and automobile organizations. Stupendous as the suggested affair seems it is entirely practicable. Some time in the summer an automobile week could be arranged in St. Louis, during which races, hill climbing contests, brake trials, etc., would be held. Automobilists from all over the United States would be invited to attend and to make the journey in their own machines. It would be necessary for some national body like the N. A. A. M. to organize the local clubs, and publish information and arrange a schedule for the different runs.

Each club would form its own party and organize the automobilists of its particular locality. Then on a certain day the automobilists from the point farthest from St. Louis would start. The next day those of nearer cities would get away, and so on, so that a few days before the beginning of automobile week a bird's eye view of the United States would show hundreds, or maybe thousands, of automobiles heading for the exposition from north, east, south and west.

The effect of such an undertaking on the industry and the impetus it would give the sport, would surpass anything ever before attempted, as it would be one of the notable events of the year, occupying the public attention for 2 or 3 weeks. Foreign visitors would get a correct idea of the progress of our industry and of the immensity of our country, as there is no doubt many Europeans would take this method of reaching the fair. Newspapers would devote columns to the arrival and departure of the various vehicles in the cities through which they passed.

This plan has already been suggested to James E. Sullivan, who has charge of the sports at the exposition, and he promises to give it his hearty support. Several prominent automobilists in New York, who were approached on the suggestion, grew enthusiastic over its possi-

bilities. It now remains for one of the national bodies to take the matter up and put its possibilities into definite form of action.

At each successive world's exposition the automobile exhibit has grown a little larger. Next year at St. Louis all previous displays will be eclipsed and the world may come and see in quietude the world's vehicles in their most highly developed form. This of itself is a demonstration that is bound to impress the public strongly of the wonderfully growing importance of the automobile. But after all its lesson is hidden except for those who wish to learn. The automobiles

that are in use throughout the country if put into use with a single definite purpose at the same time can force a lesson upon all.

Think of a mighty caravan added unto at every stage of its journey, growing day by day and steadily sweeping on toward the welcome of a world's fair city, there to constitute the vital interest of the moment. Think of the thousands upon thousands who would see or read of it, though they never pass the gates of the exposition. Think of the other thousands who would view the cavalcade en masse at its destination. Unto them would be given such a demonstration of the wide spread of automobiling that they who have in the past considered motorists as a wee body of exclusives would be forced to acknowledge the universal adaptability of the modern power and reckon upon the necessity of fair treatment of it in legislation and other matters of public policy.

Great indeed may be the gathering of the clans at St. Louis—but also great it must be to be anything at all. Feasible, possible, practicable, the plan in its immensity of scope must be put under way early to insure success and must be managed with a seriousness of purpose and a certainty of method that will make the result equal the expectation.

WOMAN MOTORIST STARTS LONG TRIP

Mrs. S. E. York and Party Leaves St. Paul for Portland, Me., Bent on Demonstrating the Adaptability of the Automobile to Strictly Amateur Touring—No Extra Equipment Is Carried—Journey May Be Extended to St. Louis

Minneapolis, Minn., Oct. 24—The Twin Cities of the Northwest are to figure in an automobile trip of unusual importance. This is a trip which has not for its object either records or endurance test, but which is to be a pleasure trip pure and simple. As the court house clock in St. Paul was striking 11 this morning, a Packard, containing a party of four, pulled out of the city on a run which has for its objective point Portland, Maine.

TRIP PLANNED BY WOMAN

The trip is being made by a woman, who believes that the automobile is the ideal machine for touring. Mrs. S. E. York, whose home is at Portland, but who has been spending the summer in Minneapolis, is the originator of the trip, and will drive the car a good part of the distance, although she has a professional chauffeur with her.

The party consists of Mrs. York, Mr. and Mrs. H. E. Howard, of Minneapolis, and Jack Elliott, of St. Paul, who goes as chauffeur. Charles P. Joy, of Joy Bros., St. Paul, who sold the car which is being used, started with the party today, and will stay with it for 2 days, to see that everything runs smoothly.

NO EXTRA EQUIPAGE

As the big Packard rolled out of St. Paul this morning, there was nothing to indicate that it had started for a through trip to the Atlantic, and that it would see no rest until it had visited Chicago, Detroit, Buffalo, New York, Boston, and finally Portland. With the exception of an extra tire and a full equipment of tools, there was nothing in the outfit in addition to what the ordinary machine carries.

The tour will be of interest to automobileists, as it will be the first attempt at any such distance with a full load of passengers, and without any unusual accessories. Like the drivers of Old Pacific, the St. Paul-Minneapolis party will endeavor to go through without the aid of "man or beast."

Mrs. York expects to be able to carry the party through in time to avoid the cold weather, and it is believed that the start is late enough so that no mud will be encountered. The St. Paul chauffeur is an expert in the handling of a car, and although Mrs. York at first intended to take the car through herself, she was finally persuaded to take an expert, to relieve her of the care of the machine.

THE PROJECTED ROUTE

The party started for Chicago by way of Rosemount, Faribault, Rose Creek, to Dubuque, Iowa. Minnesota and Iowa roads are now in prime condition, owing to the continued fine weather, and no trouble is expected this side of Chicago.

From Dubuque the party will go to Galena, then to Rockford and through Elgin to Chicago. No stop will be made in Chicago, and the car will make a fast run through Indiana and Michigan to Detroit.

At Detroit the party will cross into Canada, and will go through London, to Niagara Falls, and across to Buffalo. From Buffalo the objective point will be New York, by way of

Albany. No northwestern machine has ever made a longer trip than to Cleveland, and while the present tour is not against time, an effort will be made to reach New York in good season.

No stops will be made except at Detroit, where at least a day will be spent. From New York the party will continue its course directly to Boston, and from there by the shortest possible route to Portland.

MAY GO TO ST. LOUIS

Although this will end the trip for the time being, it is not the end of the tour. Mrs. York expects to reach Portland with her party in December, and will remain there until the roads open in the spring. The tour will then be continued southward, with St. Louis as the terminus, and the world's fair as the object. Plenty of time will be spent on the trip in the spring, as the journey is for pleasure only.

Portland motorists already know something of the trip, and it is stated that they are preparing a grand welcome for the travelers if they reach the coast without serious mishap. It is expected that the tourists will receive ovations all along the line, as they are attempting to prove that the automobile is a practical pleasure vehicle for common use.

Minneapolis and St. Paul will not be forgotten on the trip. The travelers have caps made especially for them, bearing the legend, "St. Paul-Minneapolis to Portland," while streamers on the car also announce the starting point and the destination. The trip will be watched with great interest from this end, and many other long trips are now being planned for next spring and summer.

THE FIRST DAY OUT

St. Paul, Minn., Oct. 26.—The York party, which left this city Saturday for Portland, Me., made the run from St. Paul to Owatonna, a distance of 85 miles, in less than 7 hours, reaching there before 6 o'clock Saturday night.

Charles P. Joy there left the party, and the car is now pushing through to Chicago with its regular party of four. The roads are

proving to be all that was expected. Mrs. York says that if Portland is reached in good time and the winter has not settled, the trip to St. Louis will be begun within a week after the arrival at Portland. Provided the roads and weather will permit, she intends to cut the Portland visit to 3 or 4 days and push on to St. Louis, with the idea of covering as much ground as possible this fall.

It is likely, however, that the party will be compelled to stay in Portland for some time, owing to the approach of winter.

OTHER NORTHWESTERN TOURS

Other Minnesotans have made long trips this summer, F. E. Dickinson going from Minneapolis to Cleveland, and H. E. Wilcox from Minneapolis to St. Louis. In both instances, however, the cars were running light, with only two passengers. The Packard is carrying four persons of ordinary weight.

VERMONTERS ELECT OFFICERS

The annual meeting of the Automobile Club of Vermont was held in Montpelier, October 12, and the old board of officers unanimously re-elected. The board is as follows:

President, Dr. L. Hazen, of Burlington; first vice-president, W. B. Fonda, of St. Albans; second vice-president, C. C. Warren, of Waterbury; secretary and treasurer, W. D. Woolson, of Springfield; entertainment committee, Dr. W. H. Englesby, of Burlington; Dr. C. W. Staples, of Lydonville; J. G. Ullery, of Brattleboro; runs and tours committee, C. C. Warren, of Waterbury; C. J. Ranlet, of St. Johnsbury; C. H. Walker, of Chester; legislation committee, Dr. L. Hazen, of Burlington; W. B. Fonda, of St. Albans; C. C. Warren, of Waterbury; W. D. Woolson, of Springfield; C. A. Harris, of Brattleboro; good roads committee, C. H. Clark, of St. Johnsbury; E. D. Whitney, of Brattleboro; E. E. Boomforth, of Waterbury.

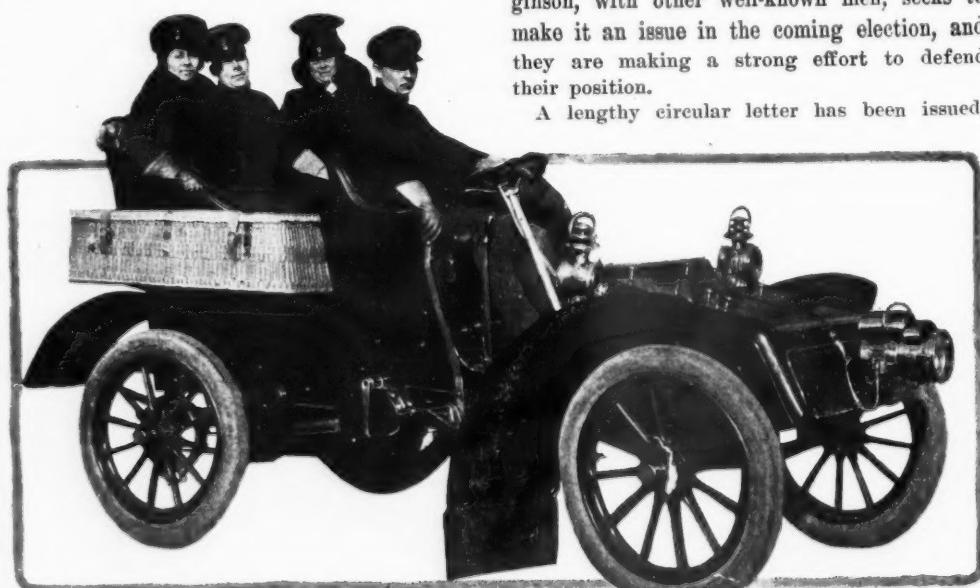
STEARNS CAR REACHES NEW YORK

New York, Oct. 28.—The Stearns endurance run car which, driven by James Patton, left Pittsburgh, Pa., last Thursday on a fast return trip over the endurance run route, reached here in good condition yesterday.

MOTRING A CAMPAIGN ISSUE

The drastic automobile law which went into effect in Massachusetts on September 1 has aroused strong opposition among the motorists. The father of the bill, Henry L. Higginson, with other well-known men, seeks to make it an issue in the coming election, and they are making a strong effort to defend their position.

A lengthy circular letter has been issued,



MOTOR AGE

The York St. Paul-Portland Touring Party as It Left St. Paul in the "Minnesota"

signed by J. Malcomb Forbes, Moorefield Story, Thomas L. Livermore, Samuel Hoar, Francis P. Sprague and Henry L. Higginson, in which they anticipate the opposition by saying that it is understood that a determined effort will be made during the coming legislative session to have the law repealed and more favorable provisions made for the motorists. They say they believe the law as it stands is vitally necessary for the protection of the public in order to prevent accidents caused by the running of machines at high speed on the highways, and they ask the co-operation of the public in bringing the matter directly to the attention of the candidates and requesting them to make a stand against the repeal of the law.

GETS READY FOR ELECTION

The nominating committee of the Chicago Automobile Club met Monday night and made up a ticket to be voted on at the regular elec-

THE BUFFALO CLUB GROWS RAPIDLY

Officers Have Pushed Its Affairs Vigorously —Club Men Test State-Made Good Roads —Endurance Run Return Trips

Buffalo, N. Y., Oct. 26—The newly elected officers of the Automobile Club of Buffalo have taken office. They are William H. Hotchkiss, president; Augustus H. Knoll, vice-president; Frederick J. Wagner, secretary; E. R. Thomas, treasurer; Edward H. Butler, Bert L. Jones and Dr. Lee H. Smith, governors. For the past year most of them have been at the head of the club's affairs, and the organization has flourished and grown greatly.

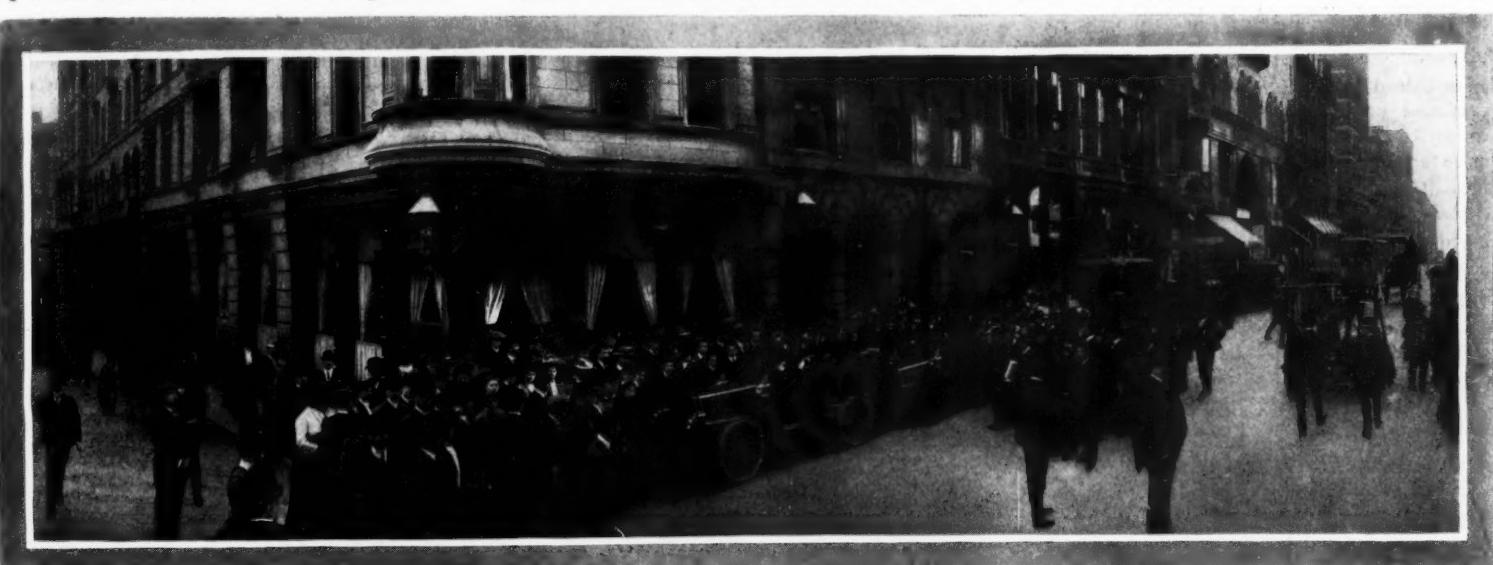
The 400 mark is near at hand in the club's membership and before January 1 it is expected the total will reach, if not pass, 500. There are over 1,200 automobiles now owned in Buffalo, and at the banquet to the participants

The car left Erie, Pa., for Buffalo shortly before 9 o'clock on Thursday morning and made the run of 96 miles in less than 5 hours. Mr. Kingman lost his hat on the way and came through bareheaded.

The second car to arrive here was the Stearns. It came in at 10:30 o'clock on Friday night and whizzed up Main street to the garage. It passed many Buffalo cars on the way, but they were clean and tidy compared with this big stranger, covered with mud and dust, while its occupants were clad in leathers and rubbers. In addition to James Patton, the Stearns mechanic in the endurance run, the car carried newspaper correspondents from Pittsburg.

BRIGHTON BEACH ENTRIES

New York, Oct. 27—Up to this morning there had been 47 entries received for the race meet of the Long Island Automobile Club of Brighton Beach next Saturday.



MOTOR AGE

The Officers of the Honourable Artillery Company, of London, and of the Ancient and Honourable Artillery Company of Boston Starting from the Parker House in Toledo Cars on a Trip to Harvard University

tion of officers, which will be held November 12. The ticket named is as follows: President, John Farson; first vice-president, Dr. F. C. Greene; second vice-president, W. G. Lloyd; secretary, W. J. Duntley; treasurer, James A. Charter; directors, Charles W. Gray, T. J. Hyman, B. H. Marshall, J. R. Markle, Ira M. Cobe, Dr. H. E. Thomas.

One, and possibly two, other tickets will likely be sprung before the election, and there may be an exciting contest. The new officers are expected to inaugurate a vigorous campaign and instil new life into the club.

The affairs of the club have not been progressing satisfactorily of late, as the members have taken but little interest in club matters, and as a natural result the club has been allowed to lag behind.

CLUB FOR TROY, N. Y.

Troy, N. Y., Oct. 24—The Automobile Club of Troy was organized yesterday, with fourteen charter members. The officers selected for the coming year are: President, Alonzo McConihe; vice-president, Edward Murphy; secretary and treasurer, Dr. Archibald Buchanan; trustees, including the above officers, W. L. Gardner, H. S. Ludlow and John Squires. The trustees were given power to select suitable quarters to be occupied by the club.

The British Dunlop patents expire next year, and this will no doubt have some effect on pneumatic tire cost.

in the recent endurance run and the manufacturers at the Hotel Iroquois on October 10, President Hotchkiss, who acted as toastmaster, said that before October 1 of next year there would be 2,500 automobiles owned here. Already orders for thirty touring cars are known to have been placed by well known Buffalo men, the cars to be delivered by March 1.

INSPECTING NEW ROADS

This week State Engineer Edward A. Bond and other state officials from Albany will visit Buffalo to inspect the good roads built under state supervision within a radius of 20 miles. The Automobile Club, of Buffalo, has sent a formal invitation to the officials, and is arranging to meet them here and escort them in cars owned by club members on the trip of inspection over the various roads.

RIKER AND STEARNS ON WAY EAST

Two of the automobiles that went through from New York to Pittsburg in the endurance run passed through Buffalo last week on their way back to New York in a return trip over the route of the run. One was the Locomobile driven by A. L. Riker. It arrived in Buffalo at 1 o'clock on Thursday afternoon, October 22. Mrs. Riker and J. A. Kingman, advertised the Iroquois until Friday morning, when they went on toward New York. They celebrated Mrs. Riker's birthday while here and were welcomed by a number of local automobilists.

These forty-seven are contributed by twenty-eight individual entrants. The 5-mile race for gentlemen drivers has fifteen entries and there are twelve nominations in the handicap. The most prominent machines entered in the open events are that famous trio of rivals—the Darraq, to be driven by F. A. La Roche; the Deauville, now owned by B. M. Shanley, Jr., of Newark, and the Packard Gray Wolf. A match race at 3 miles between two noted steam freaks, one built and driven by George C. Cannon, of Harvard University, and the other by John Howard, of Trenton, has been featured as the special event of the day. The latter machine made very fast time at this track last year, and has been entirely rebuilt.

A. C. A. WINTER PROGRAM

New York, Oct. 27—The Automobile Club of America will begin its winter series of club nights on Tuesday, November 10, with a general experience meeting, at which members will probably recount their adventures in the recent endurance run. Lamar Lyndon is to give illustrated lectures on storage batteries on November 24 and December 8.

The first one of the Fischer system of busses made its appearance in New York Monday. A novel feature is the placing of movable chairs on the upper deck. The back of the latter sweeps around in a graceful curve, resembling the back of a tonneau.

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ON THE WORK OF THE A. M. L.

The officers of the American Motor League seem bound to create for that body a directness and usefulness of purpose that seemed almost without the range of possibility 2 years ago, when the league was a feeble organization with an indefinite object and with a somewhat precarious existence.

Those who have outlined the work of the A. M. L. have been wise in choosing lines which are not vigorously pushed by other automobile organizations.

The good roads work is, of course, vital to all automobilists, but no one organization can do all the missionary work desirable, and there is small danger of a clash of interests among organizations in this direction.

In its other lines of work the A. M. L. is distinctly exclusive so far as organizations of more than local influence are concerned.

The erection of sign boards on roads, and of danger signals, and the establishment of official hotels and automobile stations are efforts to make touring and local automobiling more pleasant and more nearly free from common difficulties, and in such work the league touches a responsive chord in each automobilist, whether his motoring purpose be this, that or some other thing.

Consequently the league has entered a field which appeals to a far greater number of motorists than could any other.

The success of the various undertakings of the league depends entirely upon the creation of a body of extensive membership, but fortunately the objects which need membership to be carried out, are of themselves the objects which attract membership.

ON MOTOR CYCLES FOR WAR

All warlike countries have for several years experimented to a more or less extensive degree with automobiles for military service, but until the recent Austrian military maneuvers only passing attention has been paid the motor cycle in this connection.

In these Austrian exercises, however, the motor bicycle played quite as important a part as did the automobile.

A corps of motor bicycle riders, both officers and enlisted men, were used for the carrying of dispatches, and in the performance of the service were required to ride not only on all sorts of roads, but through open fields.

The work done was entirely gratifying, for including the rides over almost impossible highways and ground never intended for

travel, the machines averaged over 23 miles an hour during the whole of the continued test.

A wide field is opened to the motor bicycle in military use. Proven to be adaptable wherever the pedal propelled bicycle is adaptable it furnishes the additional advantage of greater continuous speed.

A division of an army on motor bicycles could effect a change of position in military maneuvers or in actual war much more rapidly than by any other practicable means, for the use of railways is often out of the question, while the use of automobiles to transport a large body of men includes a total of expense many times greater than that resulting from the adoption of the two-wheelers.

We may eventually become a peaceful race, but it is sure that for play or actual warring there will for a considerable number of years be an opening for the motor bicycle, and makers of these machines can reap a profitable harvest thereby.

ON THE ST. LOUIS EXPOSITION

Several times within the past few months MOTOR AGE has called the attention of its readers to the excellent chance offered the automobile trade by the Louisiana Purchase exposition—the next world's fair.

Then the conditions under which the American automobile display would be made had not been definitely settled, and it was only known in a general way that the exposition management would give the motor industry of this country a fair showing in comparison with that of Europe, and the total motor car industry of the world an excellent opportunity to show its strength alongside and in comparison with the other industries of transportation.

Now it is a determined fact that the American automobile display will be great in relation to that of other countries, and that the whole automobile exhibit will form one of the most striking features of the transportation building.

The National Association of Automobile Manufacturers intends to arrange for its members the details of installation and main-

tenance of exhibits, and it is hence highly probable that the collective display of its members will comprise the greatest exhibition of American automobiles ever made, while the whole display—American and European—will be the most excellent and diversified exhibition in the history of the industry.

Nor does the automobile interest at the St. Louis fair stop at the actual display of automobiles. Much, if not most, of the transportation about the grounds and between the city and the grounds will be by automobile.

Arrangements will probably be made whereby visitors and exhibitors may drive automobiles into the grounds and there store them in a specially provided station.

While no definite plan has been formulated, it is not improbable that great automobile events will make up a week of automobile sport, and will thus draw automobilists from all sections of the country to St. Louis at one time.

On another page of MOTOR AGE of this issue is suggested a plan for accomplishing this very desirable end of making St. Louis the motoring objective point for 1904.

That this or a similar plan will be carried out is almost certain, in view of the great advantages of such concerted action on the part of automobilists and the automobile trade to give a demonstration never before possible and which would draw the eyes of the world upon it.

ON BODIES AT THE SHOWS

At each succeeding show since the days when an automobile display was an adjunct to a bicycle exhibition, the American automobiles shown have had a little more excellence in body design and building.

This was specially noticeable at the shows of last winter, at which the cars were so far superior to those of the year before in body as well as chassis construction, that the fact was noticeable and notable even to and by the laity.

From body builders and automobile builders come rumors that this year a still greater step along this line will be taken. Body builders tell of orders for exceptionally high class and luxurious bodies for show cars, and automobile builders hint at novelties galore. Then will the newspaper boys write that now has come the time when automobile builders have so advanced chassis construction that they have ample attention to give to the production of bodies in whose construction is exercised the highest ability of the carriage maker's art.

An international test of acetylene lamps has been arranged in Berlin, under the auspices of the German Automobile Club. Prospective competitors must send in their samples before February 1. All communications should be addressed to the secretary of the club, 40 Sommer strasse, Berlin.

It is said that the Mercedes company has decided to take part officially only in the Gordon Bennett race, the Nice week meeting, and the circuit des Ardennes. In all other events in which Mercedes cars are entered they will be under the control of their owners.

An automobile show will be held in Turin, Italy, January 18 to 25. It will be under the patronage of all the Italian automobile clubs.

A REMINDER THAT

FOUR YEARS AGO THIS WEEK

An ordinance was introduced in the New York municipal council providing for the admission of automobiles to Central and all other parks.

THREE YEARS AGO THIS WEEK

The Munger Vehicle Tire Co. established its factory at New Brunswick, N. J.

TWO YEARS AGO THIS WEEK

Henri Fournier and a party of New York newspaper men, while driving in a Mors to look for a record trial road on Long Island were run down by a locomotive. All were more or less hurt and the car was smashed.

ONE YEAR AGO THIS WEEK

Detroit held its twice postponed race meet at which Barney Oldfield first appeared as an automobile racer.

NO MOHAWKS—PLENTY OF HOME TALENT

Professional Racers Disappointed Dayton Automobile Club but the Local Automobilists Furnished a Satisfactory Program—Meet a Typical Example of Amateur Automobile Racing—Motor Cycles Ran Fastest of All

Dayton, O., Oct. 24—Dayton has just gone home to supper after a nice, friendly, little race meet at the fair grounds, in the course of which no money seeking professionals dashed around the half-mile oval to destroy, by comparison of speeds, the sporting blood of the local motorists who had come to drive their cars against one another. True, Carl Fisher and Earl Kiser and their big Mohawk racers had been advertised as star attractions, but they did not appear, and the race meet went on without them—a family affair conducted by the enterprising Dayton Automobile Club.

GOOD LOCAL COMPETITION

The racing was, of course, not spectacular in the sense of the word since it has come to be used by newspaper writers as descriptive of strictly professional racing, but it was interesting and, in several cases, close and somewhat exciting. The spectators enjoyed it. In reality the races were as good as, if not better than, the races among local automobilists at meets this summer in larger centers, but without the strengthening influence of the big special racing cars the meet as a whole necessarily had, comparatively, less news value. Rob the meets at three or four large cities of their special events furnished by regular racing cars and the residue of sport would not have been as interesting or as notable as that of today in this little cash register town.

A typical fall day, almost bright, a trifle hazy, but not cloudy, today would have been ideal but for the coldness. Many of those who might have otherwise come stuck in their homes and the rest stuck their hands in their pockets. Officials took advantage of their authority now and then to warm their fingers on some contestant's motor.

BEST TIME BY MOTOR CYCLES

The racing was not fast, but the times were good for ordinary pleasure cars on an ordinary half-mile track. The best times of the day were made by the motor bicycles. E. E. Arnold won the 3-mile motor bicycle open on a Hercules in 4:30 2-5, a 1:30 gait. Dock Fisher on an Indian motor bicycle rode an exhibition mile in 1:33 2-5. The best time made in any of the motor car events was that of a Stearns, driven by F. P. Hilt, in the 3-mile open, which went the distance in 4:59, a 1:39 gait.

SUMMARY OF THE RACES

The first event, a 3-mile race for cars of 1,000 pounds or under, was an easy victory for an Oldsmobile. This was evident right from the start. The starters were Luzerne Custer, Olds; C. B. Wolf, Olds; Harold Talbot, Olds, and Lee Councilman, Olds. Wolf ran quickly to the lead and stayed there without difficulty for the rest of the race. Talbot was an easy-going second. The time was 6:20 4-5.

Five Cadillacs comprised the fields in the 3-mile race for cars of the 1,500-pound class and the winner, A. M. Dodds, made a half-minute faster time than the running of the previous event, completing the race in 5:50 1-5. Kneisly Jewell was second. The most of the race was among these two and Harry Cappell, who were bunched until the next to the last lap,

when Cappell dropped out. The also-rans were Walter J. Ware and C. O. Utsinger.

The line-up for the 3-mile open motor cycle race, won by E. E. Arnold on a Hercules, was Arnold; Charles Rooney, Indian; Harry Ford, Indian; and Dock Fisher, Indian. In this, the fastest race of the day, the Hercules man was easily best from tape to tape. Ford quit at the end of the mile and Fisher, considerably faster than Rooney, a close second. The time was 4:30 2-5.

Two Cadillacs and a Glide dared a big Stearns in the 3-mile open and were sorry.



MOTOR AGE Start and Finish of Cadillac Race

The Detroiters were driven by J. M. Small and C. C. Rooney, the Glide by E. Borderwisch, and the Stearns by F. P. Hilt. Borderwisch was never close enough to the bunch to ask for help, but Rooney and Small gave Hilt a lively, though unsuccessful chase, finishing in that order behind him. The time was 4:59.

The Cadillacs got back at the big fellows in the next race—3 miles for touring cars with full loads of passengers—by finishing one, two ahead of a Winton, a Haynes-Apperson and a Stearns. The starters were C. A. Bonner, Stearns; C. B. Wolf, Haynes-Apperson; J. M. Small, Cadillac; Pierce Schenck, Winton; Kneisly Jewell, Cadillac, and A. M. Dodds, Cadillac. Schenck got away quickest and opened a gap that seemed a winning margin, but after the first lap either he lost ground or the cars of the others got into bet-

ter swing, for the distance was gained and the big red car passed. Dodds won, with Jewell second and Schenck third. The time was 6:46.

In the next race E. E. Arnold, the Hercules motor cycle man, repeated his victory of the first race for the two-wheelers, in even more decisive fashion, winning from scratch against a field of five: Dock Fisher, Indian, 75 yards; Harry Ford and C. J. Wagner, Indians, 100 yards; L. Hecker, Holley, and S. R. Kramer, Thomas, 1/2-mile. The race was marred by the falling of Wagner on the last turn of the last mile. He was well shaken up but not seriously hurt. Fisher was second to Arnold. The time was 4:45.

It was after this race that Fisher rode his exhibition mile of 1:33 2-5, on his Indian.

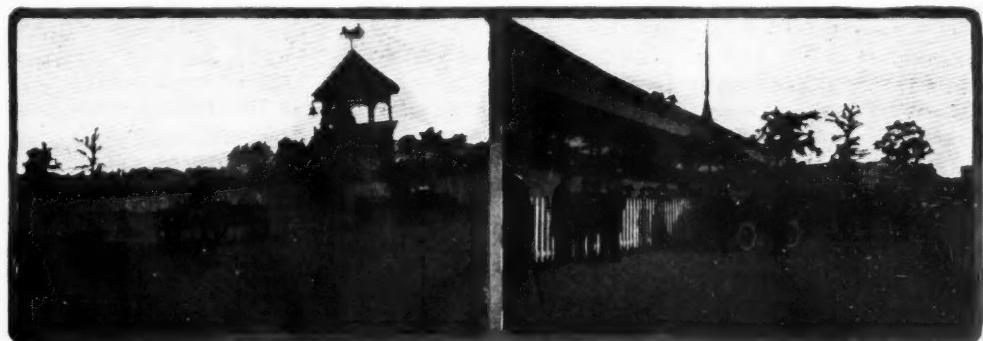
A second 3-mile open duplicated the first in order of finish and in starters with the exception that Borderwisch, Glide, did not appear. Rooney and Small, the Cadillac drivers, put up a stiffer battle against the Stearns, hanging close to it for over half the race. Hilt's time was 5:01 3-5.

FUN AT THE FINISH

The closing event, bringing into the meet strongly the item of humor, made a hit with the crowd, who were lusty in their cheers for Kneisly Jewell, who drove a Cadillac, to win. This was one of those load-start-ride-a-lap-stop-unload-reload-start-ride-another-lap-stop and unload races. The passengers carried to do the unloading and reloading were principally ankle-length skirt school girls, and they were seemingly more impressed with the gravity of the occasion than were their elders who drove the cars. For after they had jumped out at the end of the first lap, they all joined in a chorus the intent of which was an admonition for "papa" to hurry with his cranking evolutions. The spectators caught on and then every one told "papa" to hurry. It was as good as an old fashioned ball game and "papa" in most cases was made so nervous that he hardly knew which way to turn the crank. C. B. Wolf, Haynes-Apperson, was second behind Jewell, while C. A. Bonner, Stearns, was third. Pierce Schenck, Winton, was less dexterous in starting and stopping than the others and so brought up the rear.

ARE WE WAITING TOO LONG?

A prominent clubman who follows international motor sport closely recently remarked to a MOTOR AGE man: "I believe that America is careless in not making preparations for the selection of next year's James Gordon Bennett race team. There is much to do and the hurried efforts of last spring should have taught us not to procrastinate again. It is not so much that the eliminating trials of themselves take much time, but that the makers should be encouraged early to start building their cars."



MOTOR AGE Start of the 3-Mile Open

Some of the Enthusiasts

CLUBS AGREE ON CONSTITUTION

New York Organizations Ready To Formally Adopt Rules Governing the State Association—Legislation Principal Object

Syracuse, N. Y., Oct. 26—The long projected organization of the automobilists of New York state into a state association is as good as an accomplished fact. The constitution and by-laws which were sent out by a committee appointed for that purpose at the last regular meeting, held in Syracuse, has received approval of practically all the clubs in the state and will be approved by the Syracuse club.

It is rumored that the question of representation has been satisfactorily settled in the constitution. Those who thought that each club should have equal representation in the state organization have given way to the prevailing opinion that the basis of representation should be the size of the various clubs, and it is probable that each club will be represented by one or more delegates who shall be entitled to one vote for each member of the club in good standing, as shown by the books of the secretaries. No club, however, can be represented by proxy.

At the last meeting the Syracuse club took the stand that a small club would have as much influence with members of the legislature at Albany as a large club, and therefore should be entitled to equal representation. This view, however, was not held by the larger clubs and in order to insure satisfaction all around the Syracuse men decided to let the larger clubs have the say.

OBJECTS OF ASSOCIATION

President W. L. Brown, of the Syracuse Automobile Club, has received a copy of the proposed constitution and by-laws, and action will be taken by the Syracuse club at once. Mr. Brown was adverse to allowing the provisions of the new constitution to be published until after they had been acted upon. It was learned, however, through other sources, that the new organization will be called the New York State Automobile Association. The objects will be mutual co-operation in securing national legislation, the protection of automobilists from unjust laws, and work for the improvement of the roads of the state. It is also intended that the association shall affiliate with some national organization.

The membership will consist of clubs, individual owners, manufacturers, dealers and other persons in any way interested in the sport. The constitution provides that all clubs who shall before November 15 nominate directors to the first board of directors shall become charter members. Thereafter any club which has on its books not less than twenty members and any individual, who shall apply, may become a member upon the affirmative vote of two-thirds of the board of directors. No fees will be required from clubs or individuals who are members of any national association with which the New York State Association may become affiliated. Annual dues of \$1 for each individual and each member of each club will be charged.

THE OFFICERS

The MOTOR AGE man further learned that the general management of the affairs of the club and of the funds will be vested in the board of directors, three of whom shall be president, vice-president and secretary-treasurer of the association. The board will be

made up of one representative of each of the clubs which are members of the association, such representative to be named by each club not later than the fifteenth of March of each year. Should any director be chosen as one of the officers, the club of which he is a representative shall fill his place.

The officers of the new association will be president, vice-president and secretary-treasurer, to be elected by the board of directors, unless an annual meeting is held, and in that event they will be elected at the annual meeting. They will hold office from the date of election until April 1 of the succeeding calendar year and until their successors shall be elected.

Provision is made that the board of directors shall meet alternately in the eastern and western parts of the state at such places as the board of directors shall designate and not less than four times a year. The members are to be provided with proper cards of membership, badges, etc.

The consummation of this organization, which is now nearly perfected, has been mainly due to the efforts of Secretary Frederick H. Elliott and President Hurlbert W. Smith, of the Syracuse club, who have been working 2 years to interest automobilists of the state in the matter. In order that the organization might be completed they have put aside per-



J. E. Baker's Decorated Thomas Car in Recent Floral Parade at Keokuk, Ia.—1,500 Chrysanthemums Were Used

sonal considerations. A meeting will soon be held in this city to formally adopt the constitution and by-laws which are now in the hands of the various clubs.

THE WINTER SEASON OPENED

Brooklyn, N. Y., Oct. 26—The Long Island Automobile Club held its opening stag of the season at its club house last Thursday evening, continuing the precedent set last winter a general invitation was extended to all automobilists to attend. Fifty responded. These with the members present raised the attendance to eighty. The club garage on the first floor was crowded with vehicles. A vaudeville entertainment was furnished, followed by a Bohemian supper. Progressive euchre and a dance will constitute this week's entertainment.

CHEAP TIRE SERVICE

Exactly one-half of the tires on the cars that arrived in Pittsburgh in the recent endurance run were made by the Diamond Rubber Co. There were 25 cars that went through, and on these there were 12½ sets of Diamond tires. The total tire cost of these sets of tires was but 5½ mills a mile, which is a remarkable record, especially under the trying conditions encountered.

BIG RACE PROGRAM ANNOUNCED

Californians Plan Extensive Line of Sport for Ingleside Track Meeting—Many Large Cash Prizes Offered for Firsts

San Francisco, Cal., Oct. 24—Enthusiasm in local motoring circles is more than high over the race meeting of the Automobile Club of California, to be held on the Ingleside race track, the sixth and seventh of next month. There can be no doubt that the event will be a famous one for the coast with Barney Oldfield entered and also Cunningham, the Packard Gray Wolf driver.

Following is the program of the events to be run on the 2 day's of competition:

THE FIRST DAY

Two miles for gasoline cars of 6½ horsepower and under. First prize, \$50; second prize, silver cup.

Three-mile open, for cars weighing 1,200 pounds and under. First prize, \$100; second prize, \$25.

Five-mile handicap for motor cycles. First prize, silver cup; second prize, silver cup.

Five miles, for gasoline cars of 24 horsepower or under. First prize, \$100; second prize, \$25; third prize, silver cup.

Five-mile open, for cars of 1,800 pounds or under. First prize, \$200; second prize, \$50.

Five-mile open, for all cars irrespective of power or weight, but to be legitimately owned in California. First prize, silver cup; second prize, silver cup.

Ten-mile open, for all cars irrespective of power or weight. First prize, \$400; second prize, \$100.

Five-mile handicap, for all cars having participated in any of the foregoing races. First prize, \$100; second prize, \$50; third prize, silver cup.

THE SECOND DAY

Three-mile open, for cars of 6½ horsepower and under. First prize, \$75; second prize, silver cup.

Five miles, for gasoline cars of 1,200 pounds or under. First prize, \$100; second prize, \$25.

Five-mile handicap, for motor cycles. First prize, \$50; second prize, silver cup.

Five-mile open, for cars of 1,800 pounds and under. First prize, \$200; second prize, \$50.

Five-mile open, for cars under 24 horsepower. First prize, \$100; second prize, \$50; third prize, silver cup.

Ten-mile open, for all cars irrespective of power or weight. First prize, \$400; second prize, \$100.

Five-mile open, for all cars irrespective of power or weight, must be legitimately owned in California. First and second prizes, silver cups.

Five-mile handicap, open to all cars having participated in any of the foregoing races. First prize, \$100; second prize, \$50; third prize, silver cup.

The committee has appropriated \$2,500 for purses with attractive cups galore for second places, and there will be not a few special prizes offered by individuals and by some of the local automobile dealers. A prize of \$250 has been offered for the fastest mile under the minute mark made at the meet. The track has been cleared and rolled and it is expected that several world's track records will be beaten.

The Stockton automobilists had planned to hold a race meet in that city the latter part of this month, but they have now changed their

minds and all possible endeavor is being made to have Barney Oldfield race in Stockton immediately following the Ingleside event.

M. German and wife last month completed the longest trip made in the state of California in an automobile, going from San Diego at the extreme southern end of the state to San Francisco. The trip was successfully made in a Knox, it taking just 16 days from the southern city to San Jose. At the Garden City a week was spent and German reached San Francisco October 6. "It was the most pleasant trip I have ever taken," said Mr. German, "and I have made many extended tours."

W. C. Roberts, of the Edgemere Hotel, has been spending considerable time touring the state of California in his Winton. Robertson expects soon to leave for Spokane, Wash.

SHATTUCK WISHES TO RETIRE

Will Not Again Accept Presidency of Automobile Club of America—W. E. Scarritt Proposed as Successor

New York, Oct. 26—Albert R. Shattuck positively declines a renomination as president of the Automobile Club of America. Winthrop E. Scarritt has been approached by the nominating committee with a view to placing his name at the head of the ticket.

"Mr. Shattuck is emphatic in his refusal to stand for re-election," said Mr. Scarritt to a MOTOR AGE man. "He has been a faithful efficient and self-sacrificing official and the club will not easily fill his place. My business engagements will embarrass me in devoting all the time the efficient administration of the presidency of such a club demands, but if I find that the desire of the members be general that I undertake the task I will accept the nomination."

The nominating committee is made up of George F. Chamberlin, H. Rogers Winthrop and S. T. Davis, Jr. It will report its nominations to an adjourned meeting of the governors on Wednesday. The election will take place November 16.

Mr. Scarritt was the first president of the American Automobile Association, and is now president of the Automobile Club of New Jersey. He enjoys wide popularity in automobiledom and a reputation as an orator. A man of affairs, an all around good fellow, democratic in his ideas he would seem to be an ideal candidate and likely to be able to do effective legislative work.

PACIFIC COAST TRADE BREEZES

San Francisco, Cal., Oct. 24—R. G. Linaker, of Detroit, has been made manager for G. O. Heine, who has the Ford agency in San Francisco. Mr. Linaker thinks well of the future of the trade in this city, and being formerly of San Francisco, expressed surprise at the rapid increase in the number of automobiles, for when he left here there were but a few in use.

The local Autocar establishment has opened a new garage where it will handle the Autocar exclusively. It is the intention of the agency, however, to build a three-story garage somewhere in the retail district of this city, the lower floor to be used as a salesroom, office, locker rooms and parlors, second floor for storage of vehicles and top floor for repair shop.

A motor car chamois hunt was held recently at Chamois, France. There were eight cars in the chase, seven chamois were found and four were killed.

THE A. L. A. M. PATENT FIGHT IS ON

Licensed Association Enters Suit in New York Against the Ford Company, One of the Strongest of the Outside Makers

New York, Oct. 23—The Association of Licensed Automobile Manufacturers has fired its first gun in its campaign against the unlicensed makers. The Ford Motor Co., of Detroit, Mich., and C. A. Duer & Co., its agents in this city, have been served with papers in a suit for infringement of the Silden patent. The action is brought in the United States circuit court for the Southern District of New York. The Electric Vehicle Co. and George B. Selden are named as complainants.

The complaint is for the most part the formal one employed in infringement cases. It calls attention also to the fact that the Ford Motor Co. has agreed to indemnify the defendants and pay all damages. A preliminary injunction is asked.

OTHER SUITS TO FOLLOW.

It is more than hinted at A. L. A. M. headquarters that this is but the beginning of suits to be brought against various classes of infringers. The serving of papers in them is daily expected. Whether the next one is to be brought against a maker, an agent or a user is not announced.

WINTER COMMERCIAL VEHICLE TEST

New York, Oct. 27—At their meeting last week the A. C. A. governors in response to suggestions by Arthur Herschmann and others decided that the club should promote a mid-winter commercial vehicle test. It will be run sometime in the latter part of February. The idea is to encounter winter conditions of snow, ice and mud to show the capacity of the machines as all the year round vehicles as they must necessarily be. No details have been determined upon as yet.

CARS SACRIFICED AT AUCTION

New York, Oct. 23—The much advertised auction sale of automobiles took place today. Of the fifty vehicles entered all but seventeen were withdrawn. But five of them were new machines. The average cost of those sold when new was \$1,800. The average price they brought was \$500. The highest price secured was \$1,275 for a 1904 gasoline touring car in use but one month, and the lowest \$125, for a steam runabout. A gasoline runabout of this year's vintage brought \$255, and an electric hansom and brougham \$200 each.

WARNER COMPANY TAKES NEW NAME

The Warner Differential Gear Co., of Munie, Ind., whose compensating gears were recently described in MOTOR AGE, has reorganized, changing its name to the Warner Gear Co. The capitalization of the new company is \$200,000. An extensive addition to the factory is being erected and much new machinery will be installed, the demand for the gears being said to necessitate these increases in manufacturing facilities.

BALL PLANT CHANGES HANDS

The Standard Roller Bearing Co., of Philadelphia, Pa., has purchased the entire ball business of the Grant Tool Co., of Franklin, Pa.,

and will now fill orders for the balls made by that company. In order to supply the demand for balls the business will be run for a short time in Franklin, but it will eventually be moved to Philadelphia and consolidated with the Standard Roller Bearing Co., and all orders should be sent to the latter company at Philadelphia.

R. G. Grant, formerly manager of the Grant Ball Co., will have charge of the ball making plant in Philadelphia, and a number of the former employees of the Grant company will remove from Franklin to Philadelphia and enter the employ of the Standard Roller Bearing Co. T. J. Heller, formerly New York agent for the Federal Mfg. Co., for the steel ball department, has taken the sales management of the ball business.

BABCOCK'S JOURNEY EMULATED

Electric Vehicle Co. Sends Heavy Electric Car from Boston To New York—Trip Made In Four Stages

New York, Oct. 24—A Columbia service wagon built by the Electric Vehicle Co. for the Edison Electric Illuminating Co. arrived in this city at 4 o'clock this afternoon from Boston. It was driven by H. M. Wilson and had made the journey of 244 miles in 4 days.

The start was made from Boston at noon on Tuesday. Worcester was reached that night. The next day's run to Springfield, a distance of 53 miles, was made without recharging. Subsequent night stops were made at New Haven and Stamford. Leicester Hill well remembered by last year's reliability run tourists was climbed at a cost of 102 amperes of power.

The batteries were charged at Worcester, Springfield, Hartford, New Haven, Bridgeport and Stamford.

The average time for charging was 2 hours. The machine weighs 2,500 pounds. The total cost of charging was \$7.50.

UNFORTUNATE FREDONIA NO. 20

A collision with a street car in Pittsburg, Pa., on Sunday, October 18, effectually put a stop to the triumphal return of Fredonia No. 20 to the factory at Youngstown, O., after the endurance run.

The car was being driven by Frank B. Thomas, who, with his wife, was on the way home. As they rounded the corner of Fifth avenue and Wood street in Pittsburg, the Fredonia was caught between a street car and the curb and one wheel taken off. Neither of the occupants was injured, and after taking the car to the railroad station, Mr. Thomas and wife continued their journey homeward in Fredonia No. 19.

Fredonia No. 20 seemed all through its experience to meet the worst of bad luck.

RECENT INCORPORATIONS

Erie Auto Coach Co., of Erie, Pa., capital, \$25,000.

Jefferson Automobile Livery Co., of Detroit, Mich., capital, \$20,000.

Smith & Mabley Co., of Fishkill-on-Hudson, capital stock, \$500,000; to manufacture automobiles and other vehicles. Directors, C. M. Hamilton, J. A. Djerf, New York, and J. H. Richards, Brooklyn.

Tri-State Automobile and Supply Co., of Memphis, Tenn.; capital, \$3,000. Incorporators, L. M. Hall, F. F. Hill, W. T. Arrington, G. W. Brown and Caruthers Ewing.

BOSTON GARAGES NOT BIG ENOUGH

Many Branches and Agencies Intend To Erect New Establishments—Y. M. C. A. Automobile School Ready for Scholars

Boston, Oct. 24.—Rumors regarding new garages to be established are rife in this city and according to that which can be learned it seems that Boston will soon rival any other city in the land with its buildings devoted exclusively to the automobile trade. A. C. Morrison started for Cleveland yesterday, where, it is understood, he is to determine with his fellow officers of the Peerless Motor Co., the advisability of building a Peerless garage in this city. The business of this concern has so increased during the past season in this city that the present excellent and what were once considered commodious, quarters of the Peerless have become totally inadequate for the purposes of the branch. Consequently Manager Morrison has had his eyes open for a new site, and this, it is believed, he has found in the center of the automobile district. The plan is to construct a modern garage to be devoted entirely to the Peerless.

W. E. Eldridge, manager of the local Pope Motor Car Co. store, this city, who, incidentally, is delighted with the work of the Toledo car in the recent endurance contest, is also making extensive arrangements for the care of his customers' machines. He recently secured control of a large building in the rear of his garage on Stanhope street. This is to be remodeled, and connected by a run-way with the main building so that there will be two entrances, one from Stanhope street and another from what is known as the Trinity place entrance.

George H. Lowe, the White manager in Boston, is likewise looking for something new in the way of a garage. He all but secured control of a large building in this city when a boxing club appeared on the scene and paid a much larger sum than it was really worth. Mr. Lowe, however, has in mind several other buildings and the chances are that before the new year is at hand the Whites will have as fine a garage as they possess in Cleveland and New York.

It is probable that the Stanley Bros. will place a steam touring car on the market the coming season. This firm has been experimenting with the touring car for some time, but in this as in all its affairs it has kept almost silent.

Mr. Gilmore, of the Rambler establishment, held a high reception immediately upon his receipt of the news that the Rambler cars went through the recent run.

THE Y. M. C. A. COURSE

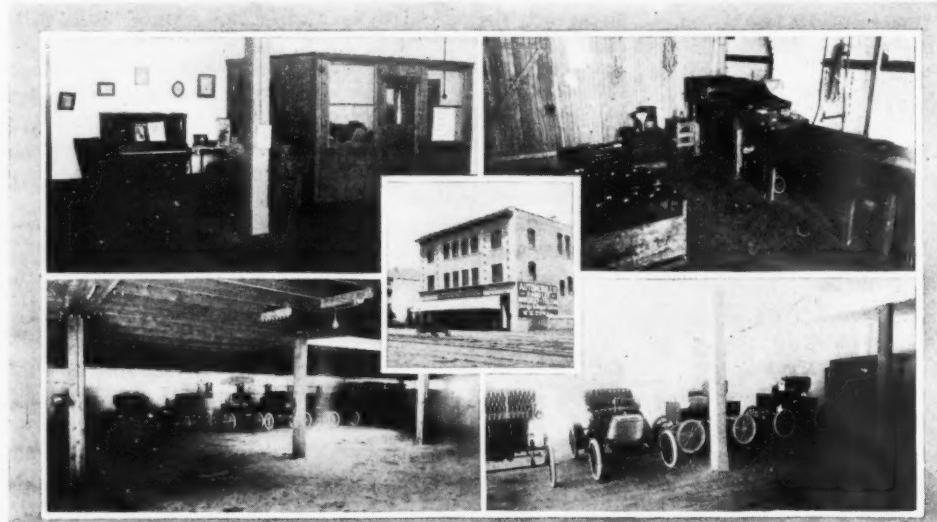
The educational committee of the Boston Young Men's Christian Association has completed its arrangements for the establishment

and opening of an automobile school on Tuesday evening, November 3. This plan originated several months ago when it was exploited at considerable length in MOTOR AGE. Instruction is to be given in three regular courses, a supplementary course of lectures and an auxiliary course of practical demonstration. These will be open to members of both sexes. The schedule of lectures is as follows:

STEAM VEHICLES—November 10, 17, December 1, 8, 15—Steam as applied to road locomotion; motor car boilers; engines of steam motor cars; care and small repairs of steam motor cars; steam motor cars as freight carriers.

GASOLINE VEHICLES—January 5, 12, 19, 26, February 2, 9—The construction and operative principles of the gasoline motor; the gasoline engine as applied to automobiles; the change

The Ladies' Reception Room



The Storage Room

W. K. Cowan's Garage at Los Angeles, Cal.

The Storage Battery Room

The Salesroom

speed gear; current American practice; inspection of gasoline vehicles; hints regarding the operation of gasoline cars.

ELECTRIC VEHICLES—February 16, 23, March 1, 8—Electricity as a motive power in vehicles; storage or secondary batteries; application of power to wheels; charging outfits.

EASTERN ELEGANCE ON THE COAST

Los Angeles, Cal., Oct. 23—The new garage of W. K. Cowan, at 830 to 834 South Broadway, is the first building erected in this city exclusively for automobile purposes. When Mr. Cowan selected the site for the building it was at least half a mile from the business district, but now stores are being built nearby, and business is springing up around him. Another big garage will be built adjoining the Cowan building in a few weeks.

The Cowan building has a salesroom 60 feet wide by 50 feet deep. In the rear of the salesroom is the garage, 60 by 100 feet, and back of this is the battery room and repair shops. The gasoline tanks and the compressed air tank are in a court at the rear of the repair shops.

The salesroom has a cosy corner for the ladies, adjoining the office. This is supplied with a piano, easy chairs and other comforts. The garage, repair shop and battery room have asphalt floors. Every convenience and improvement that Mr. Cowan could adapt from his observations in the east have been used in the new building. Mr. Cowan handles the Rambler, Toledo and Waverley cars.

SHANKS BECOMES SALES MANAGER

Hustling Publicity Man of Winton Company Given More Responsible Position—Cleveland Automobile Trade News

Cleveland, O., Oct. 26.—By the decision of the board of directors of the Winton Motor Carriage Co., Charles B. Shanks, the genial advertising manager of the company, who for some time has also acted as manager of the Cleveland retail store, has been appointed general sales manager of the company and has assumed charge of the entire selling end of the business.

Mr. Shanks will have his headquarters at the factory and with assistants will continue to take care of the publicity end of the business.

It is said that the change really went into effect some time ago, although it has just been officially announced. This explains why Mr. Shanks recently made an extended western trip to make the acquaintance of Winton agents and feel the pulse of the trade in those districts.

He has been succeeded as Cleveland branch manager by Clarence M. Brockway, for the past year Mr. Shanks' assistant, who had excellent opportunities for training for the position while Mr. Shanks was abroad and on his western trip.

Mr. Shanks' new duties necessitating assistance in the work of the publicity department, the Winton company has engaged Charles W. Mears, of Cleveland. Mr. Mears will prove valuable as he is an old newspaper man, and well posted in advertising methods. He was editor of Cycling Gazette throughout its existence, and has since been sporting editor of the Cleveland Press. The two Charlies should constitute a strong team.

STEEL WHEELS IN CLEVELAND

The Parish & Bingham Co., of this city, has brought out a steel wheel of the artillery type. This announcement is the result of a recent change in the company's affairs by which it has absorbed the American Tubular Wheel Co., of Pittsburg, Pa. This latter company formerly made a steel wheel of the staggered spoke style. Some months ago the company decided that the artillery wheel was the type likely to become standard and a wheel involving considerable pressed metal work was designed. The Cleveland concern, which is famous for complicated stampings, was asked to do the work. The advantages of the wheel appealed to Manager N. E. Parish and he proposed a consolidation.

The capital stock of the Parish & Bingham Co. has recently been increased from \$100,000 to \$250,000 to provide for the increased business. Several of the active men in the old company are now identified with the Cleveland concern and the sale of the wheel will continue to be in charge of Sales Manager Plum.

A. Auble, Jr., manager of Auble's Automatic

Garage at Akron, O., was in Cleveland recently, consulting with R. M. Owen, manager of the Ohio Oldsmobile Co. Mr. Auble is one of Mr. Owen's best customers, having disposed of nearly fifty Oldsmobiles in Akron during the season. Mr. Auble is an old timer at the trade and is in position to take care of repairs on any class of vehicle. He handles a large line of supplies and stores a number of vehicles.

A. Sparks, formerly connected with a leading Canadian concern, has been appointed superintendent of the factory of the reorganized General Automobile Co. James T. Dickson continues as designer. He has a light two-cylinder car about ready to be tested.

FIRST DAY OF STEARNS TRIP

The Stearns car of endurance contest fame passed through Cleveland Thursday afternoon on its return run to New York from Pittsburgh. In charge of James E. Patton and E. Tom Fetch, the party left Pittsburgh at 6:20 a.m. Thursday. Except for a delay of 20 minutes near Chagrin Falls, caused by a tire blowing out, and of an hour for dinner, there were no stops nor delays, and the party drew up in front of the Hollenden hotel, this city, at 3:40, making the actual running time 8 hours, 20 minutes. Frank B. Stearns met the party on its arrival in the city and the car was taken out to the factory for fresh gasoline and water. Then it went on to Ashtabula, where the party lay over for the first night.

With the approach of winter comes the natural desire of femininity to indulge the ruling passion by the purchase of motoring furs.

ANOTHER DEALERS' ASSOCIATION

Buffalo Tradesmen Organize and Propose To Hold Local Show Next Spring, Co-operating With the Automobile Club

Buffalo, N. Y., Oct. 26—The Automobile Dealers' Association of Buffalo was organized last Thursday afternoon. The tradesmen, all of whom are also members of the automobile club, met at the Genesee hotel. It is the first organization of automobile dealers formed in this city. It will not conflict with the Automobile Club.

MEMBERSHIP AND OFFICERS

All automobile dealers were invited to attend and the following representatives were present: E. R. Thomas, E. R. Thomas Motor Co.; F. Dey, George N. Pierce Co.; W. C. Jaynes, Jaynes Automobile Co.; H. C. Wilcox, Centaur Motor Vehicle Co.; John Gibson, Buffalo Automobile Exchange; George Kibler and D. H. Lewis, Globe Cycle Co.; E. L. Pelletier, Duquesne Motor Car Co.; W. Burke, National Battery Co.; Horace P. Hayes, Hayes Automobile Co.; W. W. Weller, Alexander Weller estate; V. E. Ripper, Ripper Motor Cycle Co. Other dealers were prevented from attending by various reasons. All seem to be in full sympathy with the movement, however, and it is possible that in addition to the other dealers the membership will ultimately include the dealers in sundries.

The election of officers resulted as follows:

President, E. R. Thomas; vice-president, W. C. Jaynes; secretary D. H. Lewis; treasurer, H. C. Wilcox. The president will appoint a committee of three to draft a constitution and by-laws.

DISCUSS LOCAL SHOW

After the organization was effected the dealers turned their attention to the subject of an automobile show and after a long discussion it was decided that a show should be held next spring. The officials of the Automobile Club have been desirous that a show should be held and Secretary F. J. Wagner had taken up the matter before the dealers held their meeting. The new association proposed to co-operate in conducting the show.

W. C. Jaynes informed the association that he had obtained the City Convention hall for the week of March 6 to 12, but he did not care to conduct a show individually and would turn over the hall to the association. It is probable, therefore, that the show will be held at that time. The purpose of the organization will be to get the largest possible number of entries and the net profits will be given to the Automobile Club of Buffalo. As the club had previously announced that a show would be conducted under its auspices by Fred J. Wagner in March steps will be taken to harmonize and probably consolidate the two projects.

While the 1903 show was a success, it is believed that the coming exhibition will attract a much larger number of exhibitors and that practically all of the better makes of cars will be shown.

AN ENGLISHMAN'S VIEW OF MOTOR CAR PROBLEMS

The resurrection of automobilism has given greater scope to the mechanical engineer, and has imposed upon him the serious responsibility of producing safe and reliable motors for both public and private service. There has been much discussion as to the best type of motor, but at the present time there are only three general types seriously considered, gasoline, steam, and electric.

Commercial automobilism, as distinguished from the use of these vehicles purely for pleasure purposes, covers an extremely wide field of usefulness, ranging from the light parcel delivery motor cycle or voiturette to the heavy 6-ton lorry. Between these extremes there is what may be termed the middle class, a large and important one, dealing with weights of from half a ton to 2 tons, and I am convinced that the scope is sufficiently large to justify the manufacturer focusing his energies upon one class, rather than attempting to produce cars adapted to both the lightest and heaviest class of work. In fact, for the attainment of the highest excellence of design and construction, specialization upon one useful type or size is essential. I propose in the present instance to deal with the middle class of automobilism. The working conditions affecting this class demand the utmost reliability, with reserve power, the construction being of the most permanent and durable character; also greater cleanliness is necessary than in the case of the heavier vehicles. One of the greatest essentials in commercial automobilism is reliability and certainty of action. The reputation of steam, as employed for general purpose, stands very high in this respect, and it may be laid down as an incontrovertible fact that a steam

engine, constructed so as to utilize the latest developments in the mechanical arts, embodies in greatest measure exactly those qualities which are most desired in an automobile. That is to say, it will work longer than any other without needing attention or repairs. It needs less skill to run, and possesses a larger reserve power for emergencies. It also needs no complicated and expensive change-speed gear.

The most vital parts of a steam car are the burner, boiler, condenser and engine. The production of a good boiler or steam generator has been found to rest almost entirely on the production of a good oil burner or heat generator, and the burner and boiler have each to be designed with regard to the other—to the end that, when combined, they shall form an harmonious whole, which will produce all the steam ever required, from the maximum demands when climbing a hill to the minimum when descending, or when standing still. The oil burner must be a clean generator of heat, free from smoke or smell, and as quiet as possible. It must be easy to start, and very flexible in its capacity—that is to say, it shall burn with equal efficiency at all rates of consumption, from the maximum to the minimum, and it should be adapted to use the cheaper grades of oil, which are everywhere obtainable, and which are safer to store and to handle than gasoline. The parts of the burner most subject to oxidation should be inexpensive and readily replaced.

The subject of oil-burning for steam raising is in itself so large that the whole of the time

now available could easily be occupied by investigation into this question. I was tempted to do this rather than deal with the broader subject of the steam car; but in order to make

matter clear, experimental demonstrations are desirable, and without special arrangements for withdrawing the products, the atmosphere of the room would soon be polluted, in a more objectionable manner than by tobacco smoke. Although a more thorough investigation of oil burners is not now permissible, I may outline the principles of oil burning for automobile purposes. The first is the selection of the oil to be used. The American steam car constructors have selected gasoline, which is a much cheaper commodity in the States than here, and the production of a vaporizing burner using gasoline is a far simpler matter than one to use kerosene or paraffin oil, but the use of this latter oil possesses many advantages—first, that it is only one-third the cost per gallon; secondly, that it has a higher calorific value; thirdly, it is safer to handle and store; fourthly, it may be obtained, not only in this country, but in almost every part of the world which has been reached by civilization. Another important advantage in the use of paraffin instead of gasoline is that the world's supply of paraffin is so much greater, and the present upward tendency in the price of gasoline, consequent upon the spread of automobilism, is an indication of the need for tapping the larger supply of paraffin.

Next as to the boiler, which may be defined as an absorber of heat, transforming the heat energy of the products of combustion into steam. Trials of various types of boilers, including water-tube, fire-tube, flash and semi-

EDITOR'S NOTE—This article is taken from a paper read before the British Automobile Club by Thomas Clarkson.

flash, have resulted in a preference for the simple fire-tube for general service and reliability. The flash type generator has the advantage of being able to stand overheating without leakage, but its reserve power is small, and limited more strictly to the burner power. It calls for higher skill, and frequently more exertion for pumping on the part of the driver. On the other hand, with the fire-tube boiler the risk of overheating is practically eliminated when fitted with a reliable automatic water-feed and burner control. Greater steadiness of steaming and a larger reserve power is obtained; also less skill, and no labor for pumping against pressure is demanded of the driver. The regulation of the supply of feed-water has not been found a simple matter. Floats take up a good deal of room, and have very little power. The best arrangement for controlling the supply of water to a boiler of any type—except the flash—I have found to consist of a thermal expansion device, which opens or closes the by-pass on the pump delivery. After trying several forms of thermal expansion devices, the simplest and most reliable I have found to be a steel tube placed horizontally outside the boiler at the water level. One end of this steel tube is connected with the upper part of the boiler in the steam space, and the other end is connected to the lower part of the boiler, or water space, through a syphon tube, which forms a lock to prevent convection circulation. This syphon thus remains fairly cool, yet permits the water in the controlling device to stand at the same level as in the boiler. The effect of lowering the water level is to charge the horizontal steel tube with steam from the boiler, and the effect of raising the water level causes the tube to be filled with comparatively cool water from the syphon. In addition to the automatic control of the water supply, and the heat supplied from the burner to the boiler, it is found convenient to supplement this by independent hand control.

Various forms of valve for the distribution of steam to the cylinder have been tried under the special conditions pertaining to automobile service, including those of the piston, mushroom, and slide types, both balanced and unbalanced. The type of valve which I have found to give the best results is the slide valve of circular, instead of the ordinary rectangular, form. The usual locomotive practice of connecting the valve to the valve-rod by an encircling yoke has been adopted, and, in the case of the circular sliding valve, this forms an exceedingly simple construction.

LUBRICATION

One of the most important details affecting the engine is the provision of automatic lubrication to every bearing. Speaking broadly, there are two systems of lubricating a bearing. In the first the rate of feeding is adjusted as far as practicable to the actual requirements. In the second the bearing is liberally flooded, and the large surplus recovered for use again. Splash lubrication answers well in some cases, where all of the bearings are in a position to benefit by the splash distribution, but this is not always the case, and the violent agitation of the body of oil tends to preserve in suspension any fine solid particles, either of dirt or metal, which should be allowed to settle.

For the above reasons I advocate pumping the oil under pressure. A force-pump working under the extremely favorable conditions of dealing with lubricating oil will run for years without attention, and its action may be in-

stantly tested at any time when running by momentarily pressing a button. The next step is to ensure that the oil which is pumped is going to all of the bearings. On an automobile I do not advocate a separate pump for each bearing—one pump for all the bearings is enough, only we must be sure they all get a proper share. As the long-distance steam car is required to recover the water of condensation for use again, and as it is desirable to have this water as pure and free from grease as possible, the less oil that is used in the cylinders the easier will separation become. Lubricators on the sight-feed and displacement principles I have not found to be satisfactory. The only satisfactory form which I have found is a positive pump, which forces a measured quantity, at regular intervals, into the cylinders during all the time they are in operation. Another important detail in the fitting of steam cars is the prevention of leakage from pipe joints. Brazed joints have not been found satisfactory, and screwed joints are objectionable, as it means using a heavier weight of pipe than is necessary to resist the pressure, in order to provide the extra thickness at the ends necessary for screwing. On the other hand, copper not having proved reliable, I have adopted solid-drawn steel pipes for all the service lines on the car. The thickness of this tube is about



The Babcock Party in the Buffalo Electric that Was Driven from Boston to New York

18 gauge, and is of abundant strength to resist any possible internal pressure, but it is not thick enough to weaken by screwing at the ends.

TIRES AND DUST

On the general question of the comfort of traveling on the road by motor car, several difficulties are met with, chief of which may be noted the problem of the tires and the dust. The use of pneumatic tires unquestionably gives greater smoothness, especially on bad roads, when traveling at high speeds; but there is always present the liability of puncture. For moderate speeds, up to 25 miles per hour, I have found properly constructed solid tires, combined with good spring suspension, to give practically the same freedom from vibration, and giving substantial comfort in the knowledge that one is not liable to be stranded on the road at any moment by puncture. As to the dust problem, this is partly connected with the speed question, as the dust is not such a serious difficulty to other users of the road when cars are traveling at moderate speeds. The dust problem is divided into two parts—first, as affecting others users of the road, and, secondly, the occupants of the car. A moderate speed, combined with improvements in the preparation and treatment of the surface of the road, may go a long way towards settling the question altogether; but as it will be a long time before the general road

surface of the country is materially altered, I submit that the solution of the dust problem for the occupants of the car is to adopt a covered form of car rather than the open and exposed type, and there is already a decided tendency noticeable in this direction. Observation of the condition of a car at the end of a journey will show that practically the whole of the dust is on the rear of the car, the front parts being fairly clean. The explanation of this is that the front of the car is, for the most part, traveling in a clear atmosphere, but the dust raised by the wheels is sucked after the car in the partial vacuum produced by its movement through the air, and if the rear portion of the car is effectively enclosed and made dust-tight, the front and sides may be left fairly clear. Among the other advantages of covering in the body, I may enumerate protection from rain, sun, wind, and flies.

Finally, I beg to urge upon all interested in this great development of engineering, which is sure to have so large an effect on the general welfare of the community, to discourage the indulgence of high speeds—which are unnecessary and prejudicial—and to encourage manufacturers to specialize in the production of one standard useful size of motor, which may be applied to many different purposes. Only in this way can manufacturers hope to combine the highest excellence of construction with the low cost of production which will enable this country to challenge the competition of the world.

DETERIORATION OF MACADAM ROADS

A macadamized road begins to show signs of wear at a comparatively early period after being repaired. This arises through many causes, not the least being the deficient cementitious property of the stones composing the coating and of the binding material used. The cohesion between metaling and binding is principally of a mechanical nature, although it would appear that some kind of action, either chemical or by a combination of causes, takes place when the small chips of the rock, used in preparing the macadam are pulverized to a fine powder, and in the presence of water, and by the compression of the roller, form a weak cement, says Thomas Aitken, a British expert. All descriptions of binding material are more or less mobile, and especially is this the case during a long continuance of dry weather, aided by the action of horses' feet and the wheels of vehicles. Under these circumstances the binding becomes loose, and is easily removed from the interstices of the metaling by high winds, or washed off the surface by heavy rains. This often causes considerable damage, through the stones becoming loose and dislodged, forming irregularities on the surface.

A macadamized road is generally at its best when slightly damp; too much moisture, or extreme dryness, are detrimental to the efficient maintenance of a good surface.

Artificial watering during dry weather is greatly resorted to in some districts, and, generally speaking, with good results, but the operation is a fruitless attempt at improving the structural condition of the road, although the dust nuisance is by this means temporarily abated. While recognizing up to a certain point that the methods of executing repairs on macadamized roads, carried out as described, are as nearly perfect as is practically possible, and quite suitable for the ordinary traffic passing over them in suburban and country districts, there is need for further improvement.

GOSSIP OF THE METROPOLITAN GARAGES



C. G. Wridgway, who has been kept from business for several weeks, is once more to be seen at the manager's desk of the Bunker Bros. Co.

The Moyea Automobile Co. has secured the American agency of the Martini, a Swiss automobile, which boasts several notable hill climbing feats.

Horace B. Day, the new partner in the Cadillac Co., of New York, is one of the largest wholesale dealers in olives and hotel supplies in the country.

The Buffalo electric touring car in which F. A. Babcock made his notable trip from Boston, is attracting many callers at the station of Babcock, Atwood & Bowen.

The Imperial Automobile Station, which was established at 52 West Sixty-seventh street 5 months ago, is reaping the benefits of its well chosen location in a wealthy residential district.

The Decauville racer which was driven by Henri Page at the race meets this season has been sold by the Standard Automobile Co. to B. M. Shanley, a wealthy contractor of Newark, N. J.

E. T. Birdsall, the new manager of the Standard Automobile Co., will sail for Europe next month, to visit the Paris show and arrange for next season's importation of Deauvilles.

J. Henry Riley keeps two autocars in the Automobile Exchange on Thirty-eighth street for renting. He charges \$5 per hour and \$40 to \$50 per day for the rent of a car with an operator.

The Societe Franco-Americaine d' Automobiles has added the building at 2 East Twenty-seventh street to its equipment of garages for the display and storage of Panhards, Renaults and Clements.

The Manufacturers' Cup, which is to be the prize in a 5-mile race at Brighton Beach on Saturday, has been on exhibition this week in the window of the branch house of the Diamond Rubber Co., its donor.

"There will be a magnificent display of bodies of American make at the coming shows," says Emerson Brooks, of the J. M. Quinby Co.'s branch, "and most of them will be fitted with limousine, balloon or canopy tops."

"Our only trouble lies in getting machines enough to supply the demand," says Mr. Duer,

of C. A. Duer & Co., New York agents for the Ford automobiles, in view of the hit Detroit's new make of automobiles has made in the metropolis.

Mr. Smith, the senior partner of Smith & Mabley, has become a motor boat enthusiast and hints at news of interest in this direction very soon. Alexander Fischer also has the craze and has completed designs for a boat to be fitted with a high power Daimler-Mercedes engine.

George B. Adams, formerly connected with the Packard Motor Car Co. and the Pope Motor Car Co.'s New York branches, has been made general manager of the branch house the Apperson Bros. Automobile Co. is to establish in New York. The garage will be located in the Central Park district.

Cole & Woop, body builders, of West Sixty-seventh street, New York, have taken additional floor space for their manufacturing business. They are working on fully a score of bodies for machines to be shown at Madison Square Garden. The firm is arranging also to carry a retail line of parts and tires.

"There will be two new models of Panhards next year," says Norris M. Mason, manager of the Societe Franco-American d'Automobiles, "a three-cylinder 10-horsepower and a 35-horsepower." Mr. Mason will start on November 15 to visit the Paris show and arrange for the company's exhibit at Madison Square Garden.

Elliot Mason, a veteran in the retail cycle trade, will, as manager of the New York branch of the Pope Manufacturing Co., have charge of the local selling of the Toledo and Waverley machines of the Pope Motor Car Co. The sales offices will be at No. 12 Warren street, and the demonstration department at 1711 Broadway, corner of Fifty-fourth street. Robert E. Fulton will be in charge of this up town garage.

How great is the summer exodus of automobile owners may be judged from the present crowded condition of garages, 6 weeks ago half empty. "At a low estimate," said Mr. Mortensen, of Smith & Mortensen, "fully one-half of all the machines in use in this city are taken to the country in summer. The automobile owning class is the class that has country seats, which it occupies for 3 months or more each year."

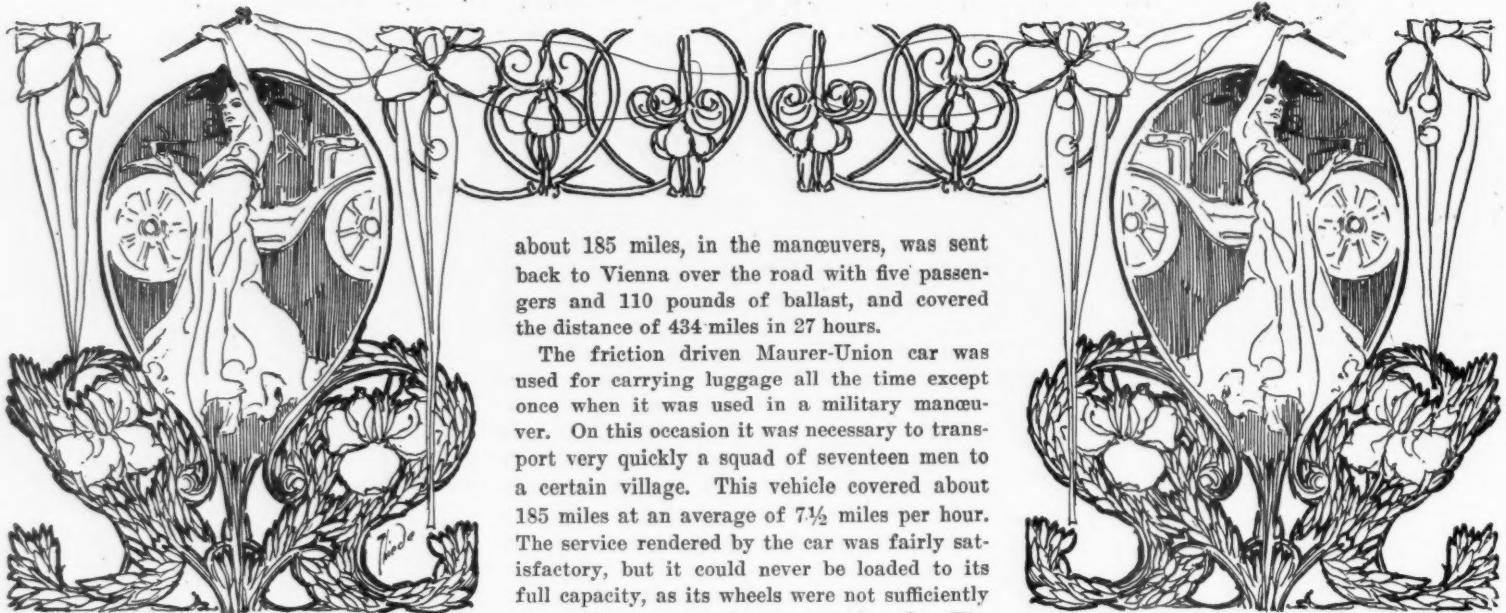
"Here's something I have been looking all over New York for and only just found,"

said A. R. Pardington to a MOTOR AGE man last week, exhibiting a brass fitting intended for the steering post and having spark and throttle levers. Mr. Pardington explained that it would cost considerable to have the fitting made, but he had found it in the unique stock carried by Leon Rubay, 136 West Thirty-eighth street, the American agent of J. Lacoste & Cie, of Paris. Mr. Rubay is showing electrical fittings for gasoline machines which are attracting considerable attention from the trade in New York. He has also several special tools which will prove valuable additions for the automobilist kit.

Norris N. Mason, who has been the agent of the Societe Franco Americaine d'Automobiles of Paris in the United States, has since August 21, taken in his own name the business and branch house founded by the company at 12 East Twenty-seventh street, New York. Mr. Mason will bear the entire responsibility of his business, the Paris concern having no connection with the New York house. Mr. Mason, however, has been authorized to use the name, Societe Franco Americaine d'Automobiles for advertising purposes. The Paris company regularly handles the Panhard, Renault, Mors and Mercedes automobiles, and is the exclusive agent for Clement cars in England and America. Mr. Mason has ordered a large number of cars to be delivered during the next 3 years and is in a position to fill orders promptly.

They are showing at the Electric Vehicle Co. an interesting photograph of the fifteen electric delivery wagons built for R. H. Macy & Co. "We delivered the chassis at half past 10 o'clock in the morning," said Manager Armstrong, "and at half past 2 o'clock that afternoon a complete vehicle with body on was standing in front of our door." The bodies were built and fitted to the chassis by Fred R. Wood. The wagons are stored in the archway at the rear of the store. Each has its own charging plug. When they are in for the night the connection is made and the charging begins. One charging is more than sufficient for a day's run which averages 15 miles. Manager Armstrong was treated to a surprise the other day by two ladies of the show girl division of the chorus. Entering the garage arrayed in the purple and fine linen of their kind they asked to be taken out in "one of those lovely electric runabouts that Miss Floradora, our leading lady, bought the other day." Their request was granted. On their return from a trip through the park one of them produced \$2,000 in bills from her hosiery saving bank, laid it on Mr. Armstrong's desk and remarked, "I'll take that."

NEWS OF EUROPEAN MOTOR SPORT AND TRADE



ROLLS BREAKS KILOMETER RECORD

A new kilometer record of 26 2-5 seconds was made by the Hon. C. S. Rolls at Welbeck, England, on October 12. The car which Mr. Rolls drove was a Mors of 110-horsepower, specially constructed, and the time in which he completed the distance makes a world's record for any class of car on any course.

The performance was timed by Harry J. Swindley and D. Straight, who are the official time-keepers of the Automobile Club of Great Britain.

The previous best records for the kilometer were: M. Augieres, 29 seconds, in France; C. S. Rolls, 27 seconds at Welbeck; Baron de Forest, 26 3-5 seconds at Phoenix Park, Dublin.

MOTOR CARS IN MILITARY SERVICE

During the recent Austro-Hungarian military manœuvres, as in previous years, automobiles were used, but motor cycles made their first official appearance this season. Twelve of them, from three different manufacturers were used, also one car of each of the following makes: Daimler, Spitz and Nesselsdorfer for carrying passengers and a Turgan-Foy steam carrier and a Maurer-Union friction drive truck.

Prior to the manœuvres, officers and enlisted men spent 6 weeks in the different motor cycle factories becoming acquainted with them and making extensive rides. The principal duty of the motor cycles during the military exercises was the carrying of messages and this they did, not only over the regular streets and roads, but also through the fields. Neither the heavy dust or the mud on rainy days stopped the little machines, which went through the ordeal in most remarkable fashion, day and night. For instance, one driver covered 82 miles in 4 hours. The motor cycles in the work imposed upon them averaged 38 kilometers—23½ miles—per hour. No accident of any consequence occurred and not once did a machine fail to reach its destination.

The Spitz tourist car covered 315 miles during the manœuvres and previously came from Vienna to the grounds, a distance of 434 miles. Excepting one puncture, the car went through the manœuvres without delay. The Nesselsdorfer car made an equally satisfactory performance. The Daimler car, which covered

about 185 miles, in the manœuvres, was sent back to Vienna over the road with five passengers and 110 pounds of ballast, and covered the distance of 434 miles in 27 hours.

The friction driven Maurer-Union car was used for carrying luggage all the time except once when it was used in a military manœuvre. On this occasion it was necessary to transport very quickly a squad of seventeen men to a certain village. This vehicle covered about 185 miles at an average of 7½ miles per hour. The service rendered by the car was fairly satisfactory, but it could never be loaded to its full capacity, as its wheels were not sufficiently strong for heavy service on rough roads. The friction transmission was fairly efficient, but by no means perfect.

The Turgan-Foy tractor carried a total of 88,000 pounds and covered 188 miles. It was used principally for carrying bread and meat and averaged 4 miles per hour.

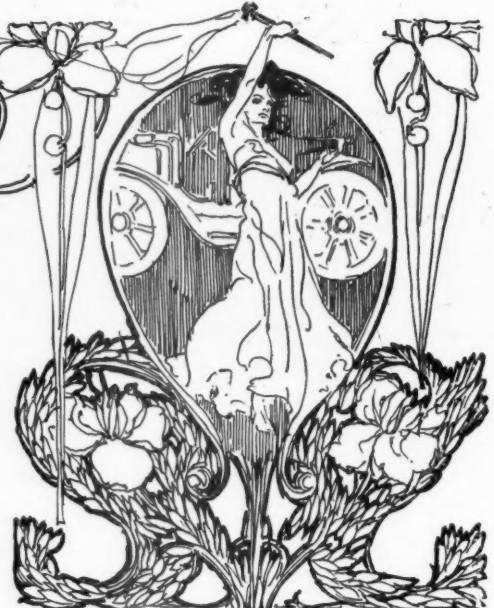
UP AN ALPINE COG RAILWAY

Perhaps the most daring achievement ever attempted with an automobile was performed recently by Captain Deasy when he drove a 14-horsepower Martini car up the cog-wheel railway on the Rochers de Naye mountain, Switzerland.

The first ascent was made on October 5, but as few people knew of it at the time and some were incredulous, the trip was repeated the following Sunday, October 11, in the presence of a large crowd of spectators.

An ordinary touring car was used, the only changes to distinguish it being that a special gasoline tank was fitted to the top of the dashboard to insure a flow of the gasoline to the carburetor on steep grades, a nine-tooth sprocket instead of the normal eleven-tooth was used, and a curved plate was fixed under the forward axle so that if a tire had burst and allowed the front of the car to drop it would not have caught in the cogged center rail of the track. Four-inch Continental tires were used. When the car was placed over the center of the track there was only about a foot of margin on each side to the edge of the granite ballast, so that a side-slip of a few inches would have sent the car tumbling a thousand feet or more.

The start up the mountain was made at half-past 2 o'clock with a London Daily Telegraph reporter the solitary passenger. A train followed a short distance behind, carrying a load of excited spectators. The grade at the start is only about 8 per cent, but after 200 yards of this the road makes a sharp turn and the grade increases to nearly 23 per cent. The power was increased here and the car was soon going too fast for the railway train, and the captain was signaled to stop. The stop was made, and when the train caught up the car was started again without assistance on this steep grade. The ascent was continued for a mile and a half to the Crete d'Ybau, which was the highest point reached, the route not being practicable higher up.



The descent proved more exciting than the ascent. Three additional passengers were taken aboard, and some doubt was expressed as to the ability of the brakes to hold so heavy a load. The car, however, was brought to a standstill on the steepest grade. A particularly trying part of the trip was the tunnel, which is about 300 yards long, with a grade of 23 per cent. As it is very dark, the steering was difficult.

In crossing a bridge where the grade is over 22 per cent the car wheels had to run on some light planks used by the employes walking along the line. When the car struck these planks, they broke, the car gave a terrific lurch and then the front and rear wheels dropped. The impetus of the car carried it down the declivity, the supporting beams giving it tremendous shocks. Had the wheels not struck on the protecting flange of the supporting steel joists the car would have overturned into the roadway 15 feet below.

FRENCH MAKERS JEALOUS

The suggestion by a few leaders in the Paris trade and sport that a Panhard car be selected for the 1904 international race team without having to enter the trial events, has caused a storm among other makers and in the press. The reason given by the projectors of this plan is that the Panhard has won the cup twice and that it would also be a fitting acknowledgment on the part of France of the services rendered the automobile trade by the Panhard company.

Henri Desgranges, of *le Auto*, speaking of the matter, says: "Sentiment has nothing to do in this matter and it is for France simply to bring the most trumps into the game. It is certain that the only authorized event in this country, next season—if it is really granted—the only time when our manufacturers will be able to show the quality of their cars, will be the race which will decide who will represent us in Germany. It is vain to say for argument's sake that in Germany the Mercedes cars are qualified without having to take part in trials, for there are few automobile manufacturers in Germany, and the Mercedes won the cup this year, while we lost it."

Mr. Darracq when questioned, was indignant, called the proposal scandalous and said it meant a repetition of the performance of the French team this year in Ireland. Henry Fournier

said that it is arbitrary and that the younger makers should be given an equal chance. "If we had always stuck to results, it might be that we would not have to make arrangements to get the cup, but simply to defend it." Mr. Cahen, of the Mors company, said that if any special car is to be chosen in advance the Mors has the best record for it, having won all important international races during the last 3 years except the Paris-Vienna event.

Louis Renault said: "Why not simply stick to the eliminating trial? I would be surprised to see another car thus favored, although we have done so in the last two big races. The whole of the French automobile world regretted that one of our cars was not sent to Ireland." Marquis de Dion, president of the Automobile Board of Trade and vice-president of the Automobile Club of France, protests strongly against any such intention. Rene de Knyff, president of the automobile club's sports committee, and connected with the Panhard and Levassor company, said: "Panhard and Levassor have been unanimously awarded the special medal or trophy, given every year by the automobile club, and the committee has expressed its intention to select in advance a Panhard and Levassor car. You know of our effort in Ireland and how close we came to winning. Even if one of our cars is selected in advance, we will compete in the special race and try to thus get more Panhards sent to Germany. It is not an easy matter to select cars by the eliminating process. See what is happening in England. A car could complete a 500-kilometer race and yet a jury could find it unable to represent us. I believe a jury ought to be selected, and I spoke about this to several prominent leaders. This jury ought to decide finally after the trials are over."

GERMAN HIGH SPEED ELECTRIC CARS

A speed of 125 miles an hour was attained last week on the high speed electric railway at Berlin, Germany. The experiments being conducted at that place are watched with great interest by the people of all countries, and United States Consul-General Mason, of Berlin, has issued an extensive report regarding them.

In 1899 a company was organized at Berlin entitled the Company of Experiments in Electric High-Speed Railways, including among its members several leading bankers, machine builders and electrical companies. The Prus-

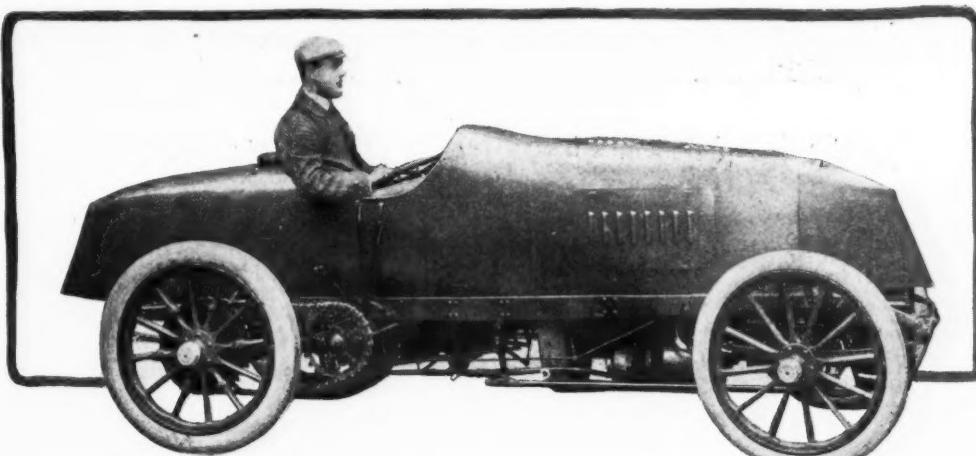


PHOTO BY ARGENT ARCHER, LONDON

C. S. Rolls on His Record Breaking Mors

sian railway administration put at the disposal of the company a stretch of straight, nearly level track 15 miles long from Marienfelde to Zossen, on the triple-track military line leading southward from Berlin. The westward track, which was laid with ordinary steel rails weighing about 70 pounds to the yard, was chosen for the experiments. It was surfaced, ballasted and put in perfect repair and stout posts set at intervals of 100 feet, on each of which was set a perpendicular steel bow, the chord of which sustained three insulators. On these were strung three parallel lines of heavy copper wire, connected with the power station on the river Spree, 5 miles distant.

Motor cars for the experiments were built by Messrs. Siemens & Halske and the General Electric Co., respectively, and these were tested during October and November, 1901, with a three-phase alternating current of 10,000 to 12,000 volts, which was reduced by transformers carried under the cars to an average pressure of 1,500 volts and in that condition turned into the motors, of which each car carried four—two at each end—with an aggregate energy of 1,000 horsepower. During these trials the speed was gradually increased to 93 miles an hour, and at this rate the track began to yield to the enormous strain, so the experiments were suspended on Novem-

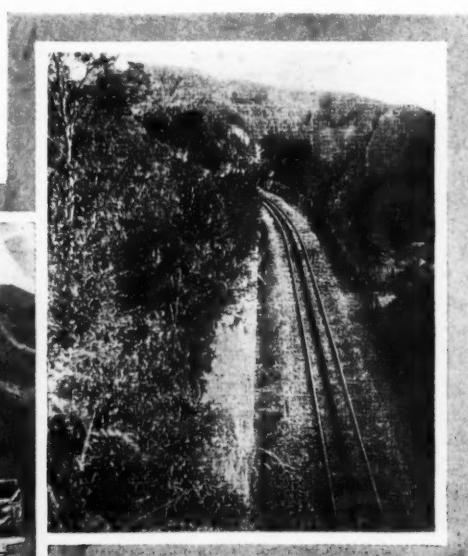
After the close of these experiments the track was taken up and relaid with new steel rails weighing 80 pounds to the yard, resting on heavy spruce ties 22 inches from center to center, and heavily ballasted with broken basalt. The rails are set on each tie in a steel chair, strongly bolted down, and are joined perpendicularly by beveled joints, 7 inches in length, held firmly together by bolts passing horizontally through the fish plates, so that the effectiveness of a continuous rail is practically secured. The old light rails were laid down flat as guard rails, resting horizontally on special cast iron chairs in such a way that the flat bottom flange of the rail stands vertically along the inside of each heavy rail and about 2 inches from the inner edge of its face. The track is a nearly level air line throughout its whole length, except for one curve of 2,000 yards radius near the southern extremity.

The motors have been improved in some minor details, but the cars are substantially the same as when first constructed. Each is 72 feet long and weighs about 200,000 pounds. Of this weight, 106,000 pounds comprise the body and running gear, and 94,000 pounds are made up by the motors, transformers and other details of electric equipment. Each end of the car rests on a six-wheel bogie truck of the American type and a motor is attached to the front and rear axle of each truck, the middle pair of wheels in each group running free. The wheels are 49 inches in diameter and are equipped with pneumatic brakes. The transformers, which are hung beneath the middle section of the car, weight 26,000 pounds, besides which a storage battery weighing 631 pounds supplies the current for lighting.

The interior of the car is provided with upholstered seats placed lengthwise, and an open railing at each end incloses the space occupied by the driver, who controls the movement by turning a pilot wheel.

On September 15 of this year another series of trials were commenced, the speed beginning at 93 miles an hour and gradually increasing until the rate of 125 miles an hour was reached last week. The transformers, motors, car, track and recording instruments all worked perfectly, the swaying movement was scarcely noticeable, and, according to the reports of those who made the trips, no discomfort from vibration, wind pressure or other cause was experienced in greater degree than on an ordinary express train.

During his visit to Paris the King of Italy had several Darracq cars which the company placed at his disposal. The courtesy was accepted with much pleasure by the King.



The Cog Railway Up Which Captain Deasy Drove His Car

ber 8. Everything except the rails and road bed had met all reasonable expectations, and no unpleasant effects had been experienced by those on board the trains.



Captain Deasy Driving the Martini Car Used in Alpine Climb



THE READERS' ? CLEARING HOUSE

ENDURANCE RUN DEMONSTRATIONS

St. Louis Mo.—Editor MOTOR AGE—One of the peculiar features of our endurance run experience was that while making a splendid run we were for the first time in our history given the trouble of a broken sprocket shaft. This cost a delay of 24 hours, occupied in repairing, but it gave Mr. Dorris a chance to get some sleep so that afterward he pushed through with little rest. He passed many of the late ones and ran into Pittsburg just 25 minutes behind the leader. We are proud of this run, because it was made by the only machine we had in the contest. Had we entered several cars of the same pattern, in all probability one or more would have come through without mishap, just as in the case of several other makes of car. We believe, however, that in such runs each manufacturer should have just one car of a certain pattern.—ST. LOUIS MOTOR CARRIAGE CO.

Syracuse, N. Y.—Editor MOTOR AGE—We are in receipt of the following telegram relative to the service in the recent endurance run of two sets of our equalizing and steering gears. It may interest MOTOR AGE readers:

Youngstown, O.—Brown-Lipe Gear Co.—Your equalizing and steering gears were used on the two cars we entered, both of which finished, and on both cars the steering and equalizing gears gave perfect satisfaction.—THE FREDONIA MFG. CO.

The Fredonia cars had about the toughest time of any in the run, being delayed so that they caught the full benefit of the storm. This, of course, speaks well for our gears.—THE BROWN-LIFE GEAR CO.

MOTOR HORSEPOWER

Milwaukee, Wis.—Editor MOTOR AGE—What horsepower should a three-cylinder motor of 4½-inch bore and 5¼-inch stroke develop at 675 revolutions per minute?—T. S.

A three-cylinder motor of 4½-inch bore and 5¼-inch stroke should develop 12 horsepower at 675 revolutions per minute.

AN EXPERIENCE

Chicago, Ill.—Editor MOTOR AGE—I recently had a peculiar experience with the motor of my gasoline touring car. The trouble was due to my own carelessness and shows that the neglect of trifling things will generally cause a great deal of trouble. Before going out for a trip into the country, I carefully reground both the inlet and exhaust valves of the motor, which is of the horizontal opposed cylinder pattern, and everything about the car that needed attention or adjustment was put in first class shape. A fast run was made for about 20 miles, when one cylinder suddenly stopped firing. The spark plug was taken out and tested, the valves examined and found to be seating perfectly, but still this cylinder refused to run. An attempt was then made to proceed homeward, with one cylinder, but after going a few miles the other cylinder stopped.

Half an hour's inspection failed to reveal anything wrong, yet the motor would not run. One of the party was dispatched to town on a trolley car, for the machinist who generally took care of the car and knew all its ins and

outs. After a wait of 2 or 3 hours the machinist arrived, put on his overalls and made a hurried inspection of the mechanism and then sat down and laughed. As soon as he recovered from his fit of hilarity he pointed out the cause of the trouble, which was simple in the extreme. The lift of the inlet valves, which were suction operated, was regulated by wedges under the end of the valve springs, close to the valve chamber. These wedges were operated by means of bell crank levers, and a rod connected to a pedal on the foot-board of the car. To remove the inlet valve chambers when regrinding the valves it was necessary to disconnect the wedges from the bell crank levers, to which they were secured by means of split pins. After regrinding the valves, to save time and trouble, I had put the split pins in place from below and omitted to spread the upper or split ends apart. The vibration of the car had caused the pins to work out gradually. As each wedge had a spring to keep it fully under the inlet valve spring when not operated by the pedal, no mixture was drawn into the cylinders from the carburetor, as the removal of the split pins caused the wedge springs to pull the wedges past the normal point and consequently choke the inlet valves altogether.—T. R.

VALVE DIAMETER AND LIFT

Jersey City, N. J.—Editor MOTOR AGE—I wish to construct a gasoline motor of 6-inch bore and 6½-inch stroke to run at a speed of 700 revolutions per minute and to have both the inlet and exhaust valves mechanically operated. What should be the diameter of the valve openings and the lift of the valves? The valve seats will have the usual 45 degrees bevel.—M. R.

For a motor of 6-inch bore and 6½-inch stroke and a speed of 700 revolutions per minute, with both valves mechanically operated, the diameter of the valve openings should not be less than 2 inches and the lift of the valves about 7-16 of an inch.

FLAT AND BEVEL SEAT VALVES

Baltimore, Md.—Editor MOTOR AGE—Why do some makers of gasoline automobile motors use inlet valves with flat seats while others use inlet valves with bevel seats? Is there any choice in the matter? If so, which is to be preferred?—W. R. F.

The use of the flat or bevel seat inlet valves is greatly a matter of preference on the part of the maker. A flat seat inlet valve does not require as great a lift as a bevel seat valve, to give the same area of opening, but a bevel seat valve is easier to regrind and keep in shape than a flat seat valve, and is more commonly used than the flat seat inlet valve.

RUPTURED INDUCTION COIL

Memphis, Tenn.—Editor MOTOR AGE—The induction coil which is used on my car in connection with the jump spark ignition of the motor refuses to operate. When the coil is tested with the batteries, the vibrator works all right and gives a good spark at the contact

points, but no spark can be obtained from the secondary terminals of the coil. When the coil is in operation a cracking noise is heard inside the coil. What is the cause of this noise and why should not the secondary spark when the primary does?—E. F.

The cracking noise heard inside the coil is due to the fact that the insulation of the secondary winding has become ruptured, probably by having operated the primary winding of the coil with the secondary winding on an open circuit. This is the cause of the failure of nearly all jump spark induction coils. A jump spark coil should never be tested without the plug being in place in the cylinder or at least grounded on the motor or frame of the car. As the primary winding has no connection with the secondary winding, it will operate the vibrator of the coil when in the battery circuit, whether the secondary winding is in good condition or not.

ANTI-FREEZING SOLUTIONS

Detroit, Mich.—Editor MOTOR AGE—Will you publish formulas for anti-freezing solutions, using calcium chloride or glycerine?—P. E. H.

Chicago, Ill.—Editor MOTOR AGE—Will you publish a formula for an anti-freezing solution to use in the water circulating system of my gasoline car?—W. W. R.

A 20 per cent solution of glycerine and water may be used, or chloride of calcium in the proportion 1½ pounds of the chloride of calcium to each gallon of water. Before mixing the chloride of calcium with the water, a handful or two of unslaked lime should be added. A combination of glycerine and calcium chloride may be also used in the proportion of 10 per cent of glycerine and ¾ of a pound of calcium chloride. With this mixture it is not necessary to add the unslaked lime.

MOTOR SPECIFICATIONS

Chester, Ill.—Editor MOTOR AGE—I am constructing a four-cycle gasoline motor of 6-inch bore and stroke, with a 1½-inch compression space. The motor is intended to run at a speed of 750 revolutions per minute. What should be the diameter and weight of the rim of the fly wheel? Also, what should be the thickness of the cylinder walls? Will 1-inch space in the water-jacket of the cylinder be sufficient to properly cool the motor?—A. C.

The diameter of the rim of the fly wheel of the above motor should be 28 inches and the weight of the rim about 245 pounds. From ¾ to 7-16 of an inch is ample thickness of the metal for the cylinder walls. Motors of 6-inch bore and stroke with only ¾-inch water jacket space are in everyday use, so that 1-inch water-jacket space should be sufficient to properly cool the cylinder.

REDUCING A RUNABOUT'S GEAR

Rochester, Minn.—Editor MOTOR AGE—As I have in the past obtained a great deal of information through the Reader's Clearing House, I ask again for more. I have a light gasoline runabout, which, while developing ample power for city use, has not sufficient power for country roads and grades. The driving wheels of the car are 28 inches in diameter. If I reduced them to 24 inches in diameter, would I not gain more power? Having had considerable trouble with the single tube tires on my car from punctures, I cut a slot in each tire,

and then filled the tires with small solid rubber balls such as children play with. The cost is trifling and I have not since been bothered with flat tires.—A. E. G.

Reducing the diameter of the wheels would not give more power, but would increase the traction of the car, by reducing the speed, thus helping the car on rough roads or up grades. A better and less expensive plan would be to have a larger sprocket fitted to the differential gear, or a new differential gear with a larger sprocket, if a split rear axle is used.

DIMENSIONS OF CONNECTING RODS

Columbus, O.—Editor MOTOR AGE—Will you publish a simple, easily intelligible rule for calculating the correct dimensions of connecting rods of rectangular section for gasoline motors?—A. J. J.

MOTOR AGE is not aware of any extremely simple rule for calculating the dimensions of connecting rods for gasoline motors. The formulas used for streets or columns, to which class the connecting rod belongs, are complicated in the extreme. The simplest plan is to obtain the dimensions from some gasoline motor of standard make and of the required power.

GRADE OF GASOLINE

Traverse City, Mich.—Editor MOTOR AGE—Which grade of gasoline—68, 76 or 78—is the best for gasoline automobile use? Would the 68 gasoline with the addition of pueric acid be equal in strength to 78 gasoline?—C. L. G.

Sixty-eight gasoline is the most efficient, or, rather, has the greatest number of heat units to a given quantity of fuel. As both gasoline and pueric acid vary so much in their composition and explosive properties, it would be impossible to make a comparison between 68 gasoline with pueric acid and 78 gasoline.

BALANCING THREE-CYLINDER MOTORS

Philadelphia, Pa.—Editor MOTOR AGE—I have noticed several articles and communications from readers in MOTOR AGE and other automobile papers relative to the balancing of three-cylinder motors and do not altogether agree with the opinions that have been expressed.

That a three-cylinder gasoline motor cannot be balanced explosively goes without saying, nor can it be mechanically balanced without the addition of weights to the crank throws or putting weights in the fly wheel near its rim at three points diametrically opposite to the three respective crank pins. That this is true may be readily shown by the aid of the accompanying drawing in which A, B and C represent the three crank pins of the motor. When the crank shaft is in the position shown in the leftmost view, the pistons and connecting rods of the crank pins B and C balance each other through the medium of the crank throws, while the piston and connecting rod of the crank pin A is neutral. If the crank shaft be turned to the position shown in the second view and in the direction indicated by the arrow, the static balance between the pistons and connecting rods of the crank pins B and C is destroyed, and the piston and connecting rod of A are no longer neutral with regard to B and C. If the crank shaft be turned to the position shown in the third view, a static balance is established between the pistons and connecting rods of A and B, and the piston and connecting rod of C. That is to say, in the position

shown A and B together form a static balance for C.

A further movement of the crank shaft to the position shown in the rightmost view gives the same conditions as those in the second view from the left, except that the motor is out of balance on the right instead of on the left hand side of the center line. This indicates that six times during each revolution of the crank shaft a static balance between the reciprocating parts of the motor is established and destroyed. In the case of a two or four-cylinder motor with the crank pins set at 180 degrees, there is at all times a static balance between the reciprocating parts. If this demonstration of the unbalanced qualities of the three-cylinder motor is not sufficient, it can be demonstrated mathematically, but as it would involve the use of trigonometrical formula it is not within the scope of this simple explanation.—G. W.

MAKE AND BREAK SPARK AT HIGH SPEED

Grand Rapids, Mich.—Editor MOTOR AGE—I am building a two-cylinder gasoline motor of 4½-inch bore and stroke. It is to run at 1,200 to 1,500 revolutions per minute and has about 70 pounds compression, gauge pressure. Can I successfully use a primary make and break form of ignition, instead of jump spark ignition, at the speeds given? I have been informed that the primary make and break form of ignition is not applicable to speed over 600 revolutions per minute. What style of coil and battery should be used with this type of ignition mechanism?—G. W. R.

The primary make and break form of ignition is in successful use on several well known cars of European make, the motors of which run up to speeds of 1,500 to 1,800 revolutions per minute. On account of the extremely high voltage required for the speed given, a battery is not suitable for this work, because of the liability of fusing the contact points when turning the motor slowly by hand. A generator wound to give 20 to 25 volts will be necessary to supply the electric current to operate primary coil. The primary coil should be wound with No. 18 B. & S. gauge copper wire, and should have a resistance of about 1½ ohms.

POINT OF VALVE OPENING

Pittsburg, Pa.—Editor MOTOR AGE—Will you publish directions for the use of pueric acid in gasoline, so as to increase the explosive force? At what point in the stroke should the exhaust valve of a motor of 6-inch bore and 7-inch stroke open? What should be the lift of an atmospherically operated inlet valve, 2¼ inches in diameter, for this motor running at a speed of 350 revolutions per minute?—A. H. H.

A gallon of gasoline will absorb about 5 per cent of its weight of pueric acid, which is equal to about 3-10 of a pound of pueric acid

to each gallon of gasoline. The exhaust valve should open when the fly wheel is at an angle of 30 degrees from the end of the stroke, or about ½ of an inch from the end of the exhaust stroke. The lift of an atmospherically operated inlet valve 2¼ inches in diameter should be about ¾ of an inch.

CORROSION IN CARBURETER

Columbus, O.—Editor MOTOR AGE—I am having trouble with the float feed carbureter of my gasoline automobile. If the car is not in use for 2 or 3 days the float and the interior of the float chamber become corroded to such an extent that the float is prevented from keeping the gasoline supply shut off. Each time the car is left standing, I have to take the carbureter apart and remove the products of corrosion before it will again operate properly. Is there any method of preventing this corrosion? The carbureter is made of cast brass or bronze and the float of spun sheet brass.—T. F.

If the interior of the carbureter and the exterior of the float are dull nickel plated, the re-occurrence of the corrosion will probably be prevented.

SPACE AT THE PARIS SHOW

Advices from Paris state that the question of space at the automobile show in the Grand Palais has been satisfactorily settled, but not without several stormy meetings between the promoters and some of the prospective exhibitors. Sixteen of the firms which had applied and received 80-meter stands in the main hall, held a meeting and decided to bring suit against the management in case the space was cut down. They also gave notice that they would hold an exhibit in a nearby hall. A meeting of the Automobile and Cycle Board of Trade was held and it was unanimously decided to oppose cutting down the spaces allotted. Messrs. Darracq and de Dion later called on the management and it was decided after lengthy argument that the spaces allotted would remain as they are, but that the 80-meter stands will not be in the main hall. Some of the best known manufacturers will exhibit in the side halls, which will probably be of benefit to the smaller exhibitors.

The record distance for a pair of chains is claimed by a 5½-horsepower English Wolseley car fitted with Coventry chains, which made 23,000 miles before they were removed from the car.

H. B. Shattuck & Son, dealers in automobiles, hardware and bicycles, in Boston and Lowell, Mass., and Providence, R. I., have failed. The liabilities will reach \$400,000.

Augustus Post, who followed the endurance run as a free lance in a White touring car, made the trip back to New York in it by way of Philadelphia.

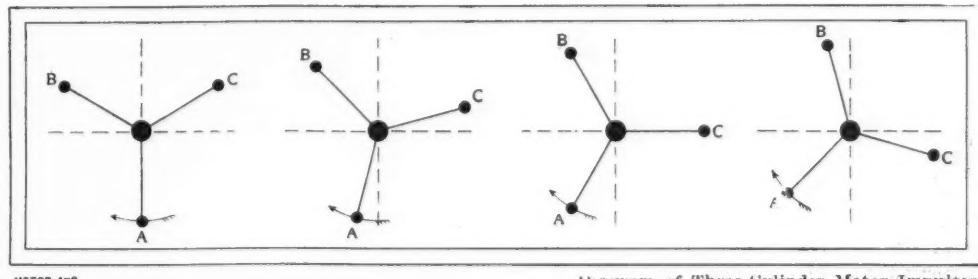


Diagram of Three-Cylinder Motor Impulses

THE FIELD OF AUTOMOBILE DEVELOPMENT



B. & S. FRENCH STYLE KNUCKLES

Although the jaw pattern of steering knuckle is so common as to be almost standard in American motor car construction, there have been some in the trade who have continually advocated the use of what is usually called the French or steering head pattern of knuckle, and probably next season there will be even more cars fitted with this knuckle than in the past. Realizing the demand for this style of knuckle, the Billings & Spence Co., of Hartford, Conn., has added to its stock line of forgings of jaw knuckles, a line of forged fittings for the Lemoine or French knuckle. This new set is intended for use with 1½-inch axles, and is especially adaptable to use on touring or other cars of from 12 to 30-horsepower.

The illustrations show the set assembled and also some of the individual forgings comprising the group. In assembling the finished forgings the steering arm may be attached rigidly to the steering knuckle by hot riveting, or it may be fastened with a nut. The hole in the steering arm is tapered both ways toward the center, while one-half of the square seat on the steering knuckle shank is tapered accordingly. Thus when the hot riveting method of assembling is adopted a double wedge union is effected. To form a similar but separable union, metal wedges may be fitted into the space between the lower taper wall of the steering arm and the shank of the steering knuckle, and the whole then forced to its seat by a nut on the extending threaded portion of the shank. Either method results in a peculiarly rigid connection. The upper or steering head shank of the steering knuckle is tapering so that it may be drawn snugly into the axle end by means of the upper cap nut.

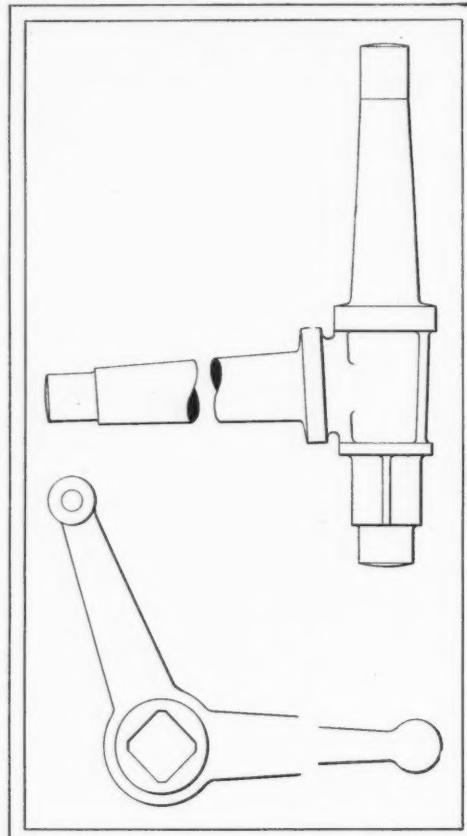
STRAINER FOR GASOLINE

The Hussey Drop Forging & Mfg. Co., of Cleveland, O., continues in its favorite pursuit, that of the introduction of automobile novelties, by the addition to its line of a little article cheerfully called the Hussey Magic strainer. As its name hints, it is for straining gasoline as it is poured into the automobile tank. It comprises a funnel in which is placed a composition filter pad, and a cloth proof against the passage of water. The cloth is removable and is held in position by a wire spring. The strainer is said to take from the gasoline not only any water or dirt contained in it originally, but to remove other and more insidious impurities whose presence is likely to cause loss of engine efficiency, if not actual fouling of fuel passages and carburetors.

CHEAP ALCOHOL PRODUCTION

The manufacture of proof alcohol from wood upon a commercial basis has been made feasible by the recent invention of Dr. A. Classen of the Aachen Polytechnic School, Germany. The Classen process has cheapened the production so that now the manufacturers of internal combustion engines for automobile use find it practicable for their purpose. By this method

at least 5 gallons of proof alcohol can be made from a ton of sawdust. The by-products made from the tailings consist of wood alcohol, charcoal, wood tar and acetic acid, all of



MOTOR AGE
B. & S. French Style Knuckle
which are produced in commercial quantities and find a ready market.

The basic principle of the new process is

the effect of sulphurous acid on wood. This acid has a dissolving effect on wood cellulose without converting it into glucose. As sawdust contains sufficient air to form sulphuric acid from sulphurous acid, three parts of sawdust to one part of sulphuric acid are used in the process. Under these conditions the bulk of the liquid is so small that the sawdust appears hardly moist and the whole process consists in heating the moist sawdust to a temperature of from 120 to 145 degrees for 1 hour.

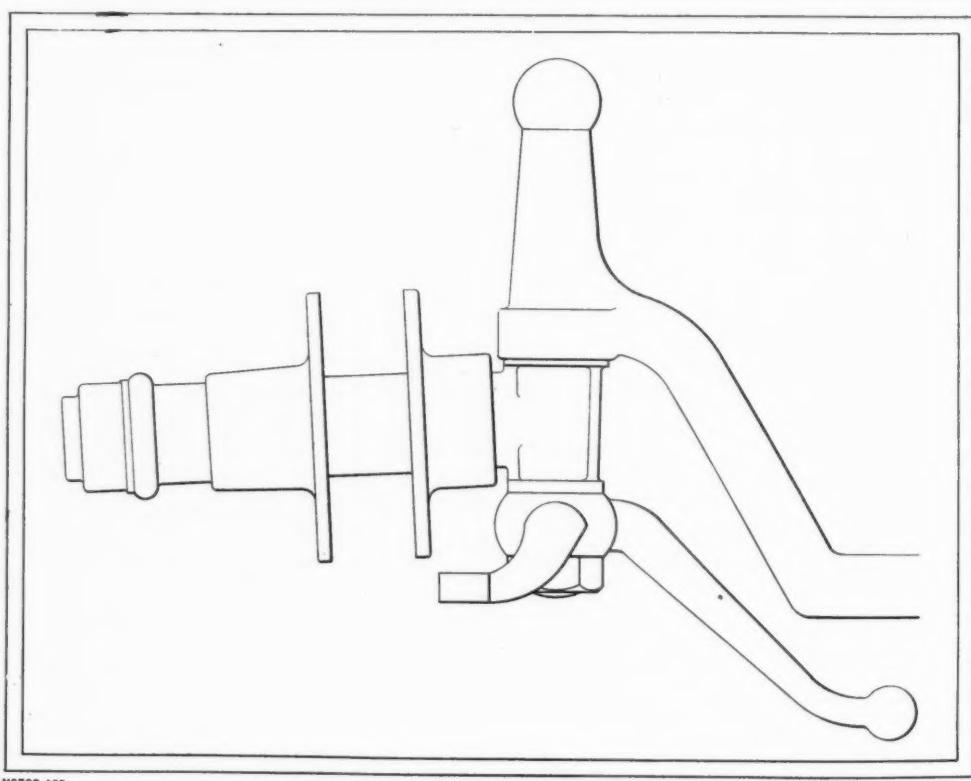
When this is finished the sulphurous acid is blown back into a condenser, and 85 per cent of the sulphurous acid is recovered, and the glucose is extracted, by means of water, from the residue, giving a liquid which, after having been neutralized with lime, is ready for fermentation. This action is induced by ordinary yeast.

As only 10 gallons of gasoline can be obtained from 100 gallons of crude petroleum, the new process promises to be of great importance in the development of the internal combustion motor.

INDIAN MOTOR BICYCLE GRIP CONTROL

Simplicity of control is even more important in a motor bicycle than in an automobile, for its rider must have other use for both hands than that of operating the controlling mediums. Many makers have worked consistently toward a practical solution of the control problem, and among them has been the Hendee Mfg. Co., of Springfield, Mass., maker of the Indian motor bicycle. The illustration shows the result of its efforts along this line—a handle bar grip control, whereby, through the turning of the grip and without removal of either hand from the handle bar, complete control over the machine is obtained. The motor is started and its speed increased or decreased, the exhaust valve lifter is actuated and the electric circuit is opened or closed by this device.

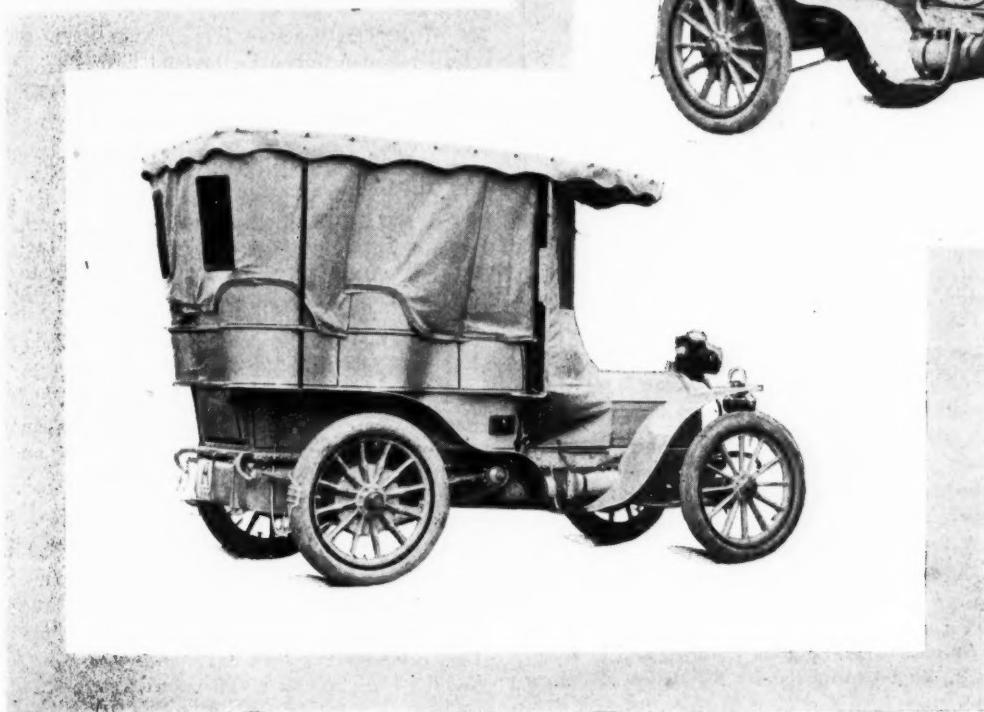
The detail of the device has been worked out carefully, so that it is proof against being made useless by any ordinary accident to the handle bars, while should an extreme accident entirely



MOTOR AGE
B. & S. French Style Steering Knuckle, Assembled

disable that portion of the bars, the governing device can be actuated from the lever at the steering head. The construction has also been affected by a desire to prevent the steering quality of the machine from being impaired by the attachment of the device.

The apparatus consists of a flexible shaft attached to the handle bar grip and leading down toward the head inside the bar tube. At the head it is connected operatively to a simple system of universal joints and a telescoping



The Mercedes Military Car With and Without Storm Hood

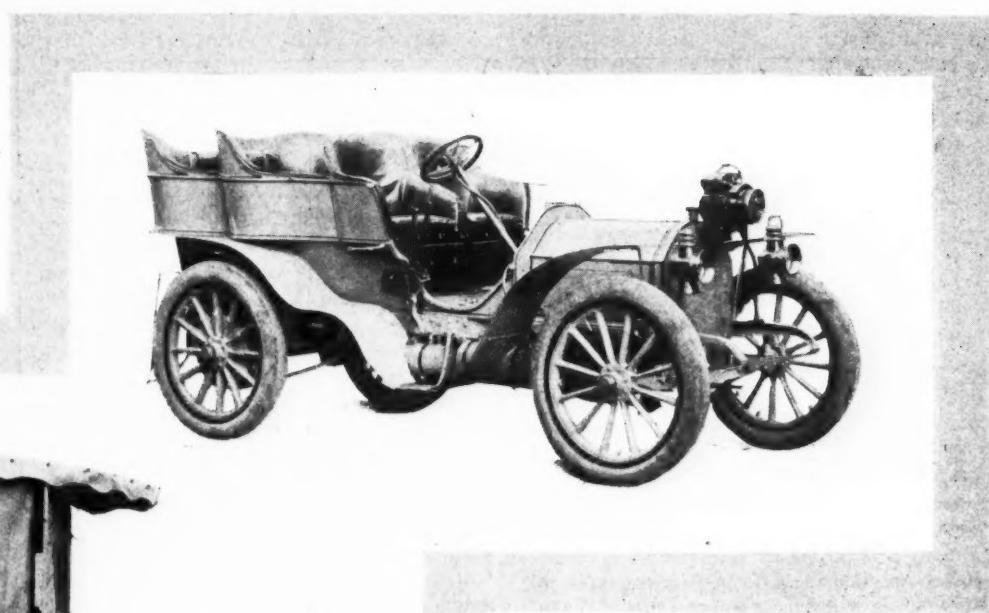
shaft which is attached to the speed controlling lever. The operation of the circuit making and breaking parts and of the exhaust valve lifter depend upon additional connections, the former at the grip and the latter at the head. All of these parts are so arranged that the complete device does not present the bulky and unsightly appearance of some combination control systems. A valuable feature is that the device is so constructed that it can be readily attached to Indian motor bicycles now in use.

DYKE'S BOOK OF TROUBLES

The A. L. Dyke Automobile Supply Co., of St. Louis, Mo., has published the first American automobile work intended entirely for the automobile user, the other books which have been published having been principally intended for students of automobile design and construction. This St. Louis publication is entitled *The Diseases of a Gasoline Automobile and How to Cure Them*. It has been prepared by A. L. Dyke and G. Preston Dorris, and aims to cover the range of subjects indicated in its title. The topics are treated in a practical manner, with many sketches and the layman may readily grasp the points brought out. It is needless to say that such a book is useful. It is truthful to say that this book seemingly serves the purpose in a thorough manner.

THE MERCEDES MILITARY CAR

The rapidly increasing demand among foreign governments for automobiles for war purposes has caused the manufacturers of the old world to turn their attention to the development of a vehicle specially suited to military use. The



well as the back part is fitted with two mica windows. The car carries two oil lamps and a big acetylene lamp in front and a small signal lamp in the rear.

The car can easily make 30 miles an hour and hills of 20 per cent can be climbed without difficulty.

THE HERZ COMMUTATOR

One of the most recently introduced of the ignition novelties manufactured by Herz & Co., 55 Grand street, New York, is the Herz timer, a circuit breaker or commutator. One of its most obvious advantages results from the absence of springs. The contact is produced between case hardened square steel pin and a steel bar. The former slides within a fitting of solid brass, encased in a box of hard rubber, aluminum and steel. It is said that the time of contact is independent of the speed at which the motor is running and that the duration of contact is sufficient to insure a series of strong jump-sparks. The commutator may be used with any style of coil, with or without a trembler. It is made for one, two, three or four-cylinder motors. High class workmanship is urged by the maker as one of its vital advantages.

COST OF RUBBER AND TIRES

The present quotations on rubber are the highest in the history of the trade, with the possible exception of the temporary high water mark reached in 1882. The high prices at that time, however, were but temporary, while the advanced figures now are likely to continue indefinitely or perhaps advance further. The rise has been steady for several months past and prices are now 50 per cent higher than they were a year ago. The small supply and the active consumption are the reasons given for the exceptionally high price for the raw material. This fact is pertinent in connection with the price of automobile tires.

A faction of the Automobile Club of France urges that each member of the club make a practice of noting the numbers of cars that are seen to be exceeding the Paris speed limit. The scheme is then that the club send the offender a formal warning, following this for a second offense with expulsion if he is a club member. A third offense is, under the plan, reason to report the matter to the police. Answer—The majority of the club members object to the scheme.



The Hendee Grip Control



FROM THE FOUR WINDS

WORLD'S TRACK RECORDS

Below are the world's track records for all classes of cars as they stand after the Empire City meet of last month, showing which were then broken:

OLD RECORDS

Miles.	Time.	Holder and Car.
1.....	:55 4-5	Oldfield, Ford
2.....	1:55	Oldfield, Ford
3.....	2:55	Oldfield, Ford
4.....	3:55	Oldfield, Ford
5.....	4:54	Oldfield, Ford
6.....	5:54 1-5	Oldfield, Ford
7.....	6:55 1-5	Oldfield, Ford
8.....	7:55 1-5	Oldfield, Ford
9.....	8:54 4-5	Oldfield, Ford
10.....	9:54 4-5	Oldfield, Ford
11.....	10:41 4-5	Oldfield, Winton
12.....	11:38 4-5	Oldfield, Winton
13.....	12:37 4-5	Oldfield, Winton
14.....	15:07 2-5	Grosso, Darracq
15.....	16:03	Sincholle, Darracq

NEW RECORDS

Miles.	Time.	Holder and Car
1.....	:55 4-5	Oldfield, Ford
2.....	1:55	Oldfield, Ford
3.....	2:55	Oldfield, Ford
4.....	3:55	Oldfield, Ford
5.....	4:54	Oldfield, Ford
6.....	5:54 1-5	Oldfield, Ford
7.....	6:54 1-5	Oldfield, Winton
8.....	7:52	Oldfield, Winton
9.....	8:49	Oldfield, Winton
10.....	9:45	Oldfield, Winton
11.....	11:56	Grosso, Mercedes
12.....	12:59 4-5	Grosso, Mercedes
13.....	14:03 4-5	Grosso, Mercedes
14.....	13:35	Oldfield, Winton
15.....	14:35	Oldfield, Winton

CAUSE—MOTOR ON ORDINARY BICYCLE

The attempt of Willis Nelson, who lives near Fort Plain, N. Y., to build a motor cycle led to a serious accident. Mr. Nelson attached a gasoline motor to a bicycle and it had worked very well upon several occasions. While he was coming down a steep hill at a rapid rate of speed the front fork of the machine broke and Nelson was thrown to the ground, striking on the back of his head. It was found that he had received a severe scalp wound, his jaw was broken, he was badly bruised and there was little hope for his recovery.

A SULTAN'S EXTRAVAGANCE

The Sultan of Johore doesn't have to worry about trifles in the financial line. Recently he bought a motor car in Melbourne and ordered it sent to him in Sydney by train. The seller suggested that it be sent by boat, as the cost would be \$100 less.

"Yes," said the Sultan, "but I'll get it a day sooner by the train, and that is the main thing after all." Then pointing to a work-

man, he said: "By the way, I want a chauffeur, also. Can I have that one with the red head?"

"No," was the reply, "that is our best workman."

"No matter," replied the Sultan. "I want him," and going up to the man he said: "If you like to come into my service, I'll give you twice the pay you are getting here, and your salary starts from this instant. Do you accept?"

A few minutes later the Sultan left the shop with his new chauffeur.

MELANGE OF BREVITIES

An extensive garage is to be opened in Troy, N. Y., in the spring, under the charge of James Lucey.

During his recent visit to Paris, King Emmanuel of Italy, bestowed the order of the crown upon Mr. Darracq.

The American Veneer Co., of New York, has erected a new factory building at New Orange, N. J., 17 miles from New York.

The Binghamton Automobile Co., of Binghamton, N. Y., expects to build a four-story factory for the manufacture of automobiles.

Lord Wimborne, of London, England, is credited with having the largest private motor stable in Great Britain. He owns fifteen cars and employs five mechanics.

The business of the Brecht Automobile Co., of St. Louis, Mo., has been purchased by H. F. Borbein, of that city, who will take care of all outstanding contracts.

A Vienna journal states that a steam automobile was made in Austria in 1834 and that on a certain day it gave exhibitions in the presence of 15,000 spectators.

Official figures show that 3,400 automobiles passed the Austrian frontier in the province of Tyrol alone. A German paper asserts that at least 5,000 foreign motorists entered Austria this year.

The H. J. Koehler Sporting Goods Co., of Newark, N. J., has opened a branch store for the exclusive sale of automobiles at Orange, N. J., and will carry the Rambler, Ford, Stevens-Duryea and Toledo cars at that place.

Captain Robert Wolf, of the bureau of military technic of the Austrian army, and Professor George Gobel, of the Imperial manual training school will inspect and test the cars entered for the Austrian international race

team eliminating trials, and unless they pronounce them worthy of competing they will not be allowed to start.

An automobile club composed of the residents of Menominee and Marinette, Wis., who now own motor cars, will be formed in the spring. There are now ten cars in the two towns and several more will be added by that time.

The popularity and accuracy of the Jones speedometer, manufactured by Joseph W. Jones, 127 West Thirty-second street, New York, is attested by numerous testimonial letters from all over the United States, several of which are published in a little booklet just issued.

It is said in Paris that the new Hotchkiss cars will be the sensation of this year's Paris show. The construction of the car is made a secret and no visitors are allowed at the factory. It is the intention of the company to build 175 cars before January 1.

Mayor Jackson, of Rockford, Ill., finds he is so occupied with his official duties that in order to accomplish his outside work with the utmost dispatch he has estimated that he can save 2 hours a day for office work by using an automobile. The mayor is now looking for a fast car.

The Fabrique National, of Herstal, Belgium, maker of motor cycles and automobiles, has announced a profit of \$300,000 for the business year of 1902-1903. The manufacture of automobiles has been abandoned and all efforts will be concentrated upon motor cycle building.

Although Charron, Girardot and Voigt, of Paris, have not yet declared a dividend, their business has been so flourishing this year that their \$20—100 franc—shares are now quoted at \$28. During June, July and August over \$400,000 worth of business was done by the concern.

A German daily paper states that the Daimler company, of Cannstadt, will have an extensive exhibit at the St. Louis world's fair. Efforts will be made to secure sufficient space to exhibit at least six different models, besides all of the earlier cars built by the oldest of all automobile manufacturers.

The German company of Monceausur-Sambre, Belgium, and the Compagnie Belge de Constructeurs Automobiles, of Brussels, will build cars for the Belgian international race team eliminating tests. The latter company is the only one that has made a formal application to the Belgian Automobile Club.

Recently a German automobilist was arrested for fast driving and was fined. He appealed and lost and appealed again, this time winning the case. The final decision was based upon the assumption that as the man was not driving the car himself he could not be held liable unless it could be shown that he had definitely instructed his chauffeur to drive faster than the legal speed limit.

The Russian road minister a short time ago ordered experiments made with five automobiles over a 365-mile road, near the Black sea. The part of the road between Novorossisk and Soukhoum, which is very hilly, rough and in fact one of the worst in Russia, was covered without a hitch. The result of the experiment seemed to please the officials so well that they

are considering the establishment of an automobile line instead of a projected railway.

Some time ago the city of Paris announced a competition to determine the best style of motor car for street cleaning. Only two manufacturers sent drawings of cars. One, Mr. Guillemant, presented a gasoline car of the Megy system, which could carry 6,160 pounds and attain a maximum speed of 10 miles an hour. Mr. Biancheri submitted two models, which could carry 7,480 pounds each, including the weight of the cars. They were rated at 7 miles per hour.

The Mead Cycle Co., of Chicago, agent for the Benz cars in the United States, has received advice from the German company that it is finishing the 1904 cars destined for the St. Louis world's fair. One of these cars will be of 2-cylinder construction developing from 10 to 12 horsepower, while the other two models will be fitted with four-cylinder motors, one of from 20 to 24 horsepower and the other from 30 to 34 horsepower. A new 8-horsepower single cylinder car is also being constructed and will be sent to St. Louis if it is ready in time.

In his decision concerning the case of automobileists who were arrested for exceeding the local 3-mile speed regulation issued by the mayor of Brussels, Belgium, Judge Hap in dismissing the so-called offenders, stated that the mayor had committed an unlawful act in issuing a law, as this could only be done by the municipal council. The decision is greeted demonstratively by the motorists, and will probably result in the quashing of similar speed regulations issued by the mayors of other Belgian towns.

Sydney, Australia, offers a good field for cheap runabouts, according to a letter from a correspondent to the Bicycling News, of Birmingham, England. The correspondent further suggests that "now is the time, before Americans get in, and any manufacturer in England who is prepared to cater to the market should send out a good representative right away." He says that owing to the country roads being so poor there is not much room for big cars for touring purposes. He also says there is a fair amount of business being done in motor launches.

The fire department was called the other day to the Syracuse Automobile Co.'s place in South Warren street, Syracuse, N. Y., to help extinguish the burning automobile of David Grody. The machine was stored in the second story and there were six men on the floor at the time. Their attention was directed to a hiss and a blaze and they saw the machine afire. They immediately pushed it towards the elevator and let it down to the street, where it burned like a bonfire for 10 minutes, to the edification of a large crowd. By the time the fire department arrived the machine was a mere skeleton.

The 3-year-old son of Mr. and Mrs. Fritz Ulrici, of Rockford, Ill., was almost asphyxiated by gasoline fumes one evening last week while on an automobile trip with his parents. The child went to sleep on the seat in the tonneau and slipped to the floor, where it was exposed to the fumes of burned gasoline which came from the exhaust pipe directly under the floor of the car. When the infant was picked up on the arrival home it had apparently stopped breathing, and the parents hurried for a physician. After working with it for an

hour, the child was restored to consciousness and in a few days had completely recovered.

On account of numerous complaints to the authorities in Austria that automobile drivers are causing many accidents and runaways, and are not observing the police regulations, the Austrian Automobile Club has taken upon itself the task of changing this state of affairs. Prince Solms-Braunfels has written a letter to the governor of the province of Lower Austria, suggesting that all automobiles be numbered and offers the free services of the club to do this work. The plan includes the furnishing of numbers at cost and compulsory numbering. The president of the Austrian club says he regrets very much to be compelled to make such a suggestion, but at the same time he believes that it is the only way to force the reckless drivers to observe the laws.

During the Belgian military maneuvers last month, the Societe la Metallurgique, one of the leading automobile manufacturing concerns of Belgium, kept several of its cars at the disposal of the representatives of the Belgian press. Among the journals which accepted the invitation was le Soir, of Brussels, whose editor had always strongly antagonized automobilizing. After the maneuvers le Soir published an article signed by its editor, in which the latter expressed his public regret at the campaign he had led against motorists and stated that he had been fully converted through his experience at the maneuvers. He added that it is likely that without this opportunity he might still be a motorphobe. There is much satisfaction among dealers as well as manufacturers at his conversion.

The publicity department organized by the business men of Honolulu is sending out some excellent advertising matter, telling of the resources of Hawaii, dwelling on the advantages of living in the land "where the sun never smites and the frost never bites." The maximum temperature on the island is given as 90 degrees, and the minimum, 57 degrees, with an average of 72 degrees. In a booklet entitled Hawaii, Its People, Climate and Resources, written by Daniel Logan, is contained

much information that will be of interest to anyone contemplating a journey to these islands, which may be made, as the author remarks, "in any of the four seasons as they are known elsewhere—here it is always a bower of beauty." The book may be obtained from the Pioneer Advertising Co., Honolulu, Hawaii.

At a dinner given by S. F. Edge, in London, England, last week, he responded to the toast, The English Automobile Industry. He said that the foreign imports of automobiles last year amounted to \$5,230,000, and this year they had increased to \$8,000,000. He expressed the opinion that it would not be long before England would see no foreign imports whatever, and that the English demand would be entirely supplied by the English manufacturers. He also announced that an English car would soon be put on the market that would mark a great advance in automobile production. This car will be fitted with a six-cylinder engine of 18-horsepower, and of great flexibility. The car is to have a hydraulic carburetor, a simplified clutch, a very long wheel base, long springs and adjustable steering, while the weight of a car to seat five persons would be less than 2,000 pounds.

The first Belgian automobile factory was built in 1896. At that time there were only four motor cars in the country, of which three were made in Germany and one in France. Their total power amounted to 12-horsepower. At the beginning of this year eighty-four concerns were building automobiles or accessories for them. The total capital of these eighty-four concerns amounts to \$6,400,000. They employ about 15,400 persons, exclusive of about 1,150 drivers. Of the 3,200 licensed automobiles and motor cycles accounted for last January, 1,000 belong to the heavy vehicle class and are valued at \$2,000 each. There are about 800 light cars, averaging in value \$1,400 each; 400 voitures averaging \$400, and about 1,000 motor cycles ranging in value from \$80 to \$140. The total value of the licensed cars is supposed to be \$3,420,000. It is estimated that there are from 400 to 500 cars which are operated without licenses.



MOTOR AGE
One of the Two Vehicle Equipment Co. Electric Trucks in Use in St. Louis by the Anheuser-Busch Brewing Co., the First Vehicles of the Kind To Be Used in That City

AMERICAN MOTOR LEAGUE OFFICIAL BULLETIN

OFFICERS

ISAAC B. POTTER, Pres., Potter Bldg., New York.
CHAS. E. DURYEA, 1st Vice-Pres., Reading, Pa.

W. GRANT MURRAY, 2d Vice-Pres., Adrian, Mich.
S. W. MERRIHEW, 3d Vice-Pres., 154 Nassau St., New York.

ROBERT L. STILLSON, Sec'y, 150 Nassau St., New York.
FREDERICK B. HILL, Treas., 32 Binford St., Boston.

NATIONAL HEADQUARTERS, 150 NASSAU STREET, NEW YORK

LEGISLATION

Geo. R. Bidwell.....	New York
Frederick B. Hill.....	Boston
E. B. Olmsted.....	Buffalo
P. L. Hussey.....	Toledo
W. Grant Murray.....	Adrian, Mich.
John A. Bechtel.....	Milwaukee
C. E. Munroe.....	Providence

ROAD IMPROVEMENT

R. E. Olds.....	Lansing
Harold M. Brown.....	Boston
Harry Unwin.....	New York
George E. Hannan.....	Denver
W. H. Kirkpatrick.....	Hartford

LOCAL ORGANIZATION

Charles F. Potter.....	Denver
H. W. Chapin.....	Syracuse
Edwin F. Brown.....	Chicago
Henry F. Spaulding.....	Buffalo
S. W. Merrihew.....	New York
Charles B. Shanks.....	Cleveland

OFFICIAL STATIONS

Last week the secretary was informed that certain dealers were, without authority, using the A. M. L. emblem as an adjunct to their advertising. No dealer or repairer has any such authority until he receives the certificate of the League and displays such certificate conspicuously in his place of business. The League will soon send to each official station an official sign, and this sign will be displayed by each proprietor of an official station. Each sign has hard, colored enameled letters and facing on rolled steel, and displays the league emblem. The sign is more than 2 square feet in area, and forms a conspicuous, attractive and permanent mark by which the official station can be at once identified by touring or visiting automobilists. It indicates that the station has been officially approved by the officers of the American Motor League, and to that extent is an index to the character and responsibility of the proprietor.

This sign remains the property of the American Motor League at all times, and must be returned to the league whenever the person holding it ceases to be the proprietor of an official station, or whenever the contract of appointment is terminated.

MEMBERSHIPS

Last week was another record-breaker; but the work at headquarters is very hard and very exacting and nothing could be quite so cheering as the knowledge that every member is doing something to build up the organization. It is difficult for the secretary to reach each member's next door neighbor, who is, perhaps, a thousand miles from New York. It is not difficult for the member to reach him.

CONSUL APPOINTMENTS

John H. Vought, South Bethlehem, Pa.
Charles A. Singer, Larchmont, N. Y.
Chauncey W. Gray, Watertown, N. Y.
E. P. Horton, White Plains, N. Y.
Winfield A. Huppich, Sandy Hill, N. Y.
F. W. Melvin, Cortland, N. Y.
Joseph W. Middlebrook, Dobbs Ferry, N. Y.
A. S. Mann, Jacksonville, Fla.
H. R. Hymes, Rochester, Minn.
Chester J. Langdon, Huntingdon, Pa.
F. W. Haskell, Niagara Falls, N. Y.
Elliott W. Johnson, South Orange, N. J.
S. H. Rous, Bala, Pa.
R. F. Manning, Greenwich, Conn.
C. A. Lane, Phelps, N. Y.
W. B. Canis, Chicago.

NATIONAL COMMITTEES

TECHNICS

Chas. E. Duryea.....	Reading, Pa.
Charles T. Jeffrey.....	Kenosha, Wis.
Ernst J. Berg.....	Schenectady, N. Y.
Alexander Winton.....	Cleveland
A. L. Riker.....	Short Hills, N. J.
Elmer Apperson.....	Kokomo, Ind.
Clark Sintz.....	Grand Rapids, Mich.
Julius W. Walters.....	Jersey City

RACING

A. G. Batchelder.....	New York
Albert Mott.....	Baltimore
Geo. G. Greenburg.....	Chicago
Chas. W. Mears.....	Cleveland
J. C. Kerrison.....	Boston
John N. Sharp.....	Salt Lake City
C. W. Carpenter.....	San Francisco

THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs, necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

John N. Sharp, Salt Lake City, Utah.
C. J. Schoening, Honolulu, Hawaii.
Edward Faucher, Middletown, N. Y.
A. J. Picard, New York.
E. S. Partridge, Brooklyn, N. Y.
F. H. Clum, Rochester, N. Y.
Hugh Miller, Attica, N. Y.
G. W. Hawkins, Houston, Tex.
C. W. Carpenter, San Francisco, Cal.
Frank E. Bailey, Lowell, Mass.
J. L. Spencer, Elmira, N. Y.
J. B. Farnsworth, Leominster, Mass.
M. E. Brightbill, Annville, Pa.
Otto I. Leisy, Cleveland, O.
M. L. Mayland, Faribault, Minn.
W. H. McCord, Greenwich, Conn.
Alex. R. Brower, Brooklyn, N. Y.
S. A. Miles, New York City.
Theo. K. Hastings, Brooklyn, N. Y.

LOCAL ORGANIZATIONS

The league is now ready to send out brief printed instructions for forming local clubs or consulates, with a recommended form of constitution and by-laws. The pamphlet containing those pointers is a small one and is easily read and understood. Only five members are necessary to begin with. Each consulate elects its own officers, manages its own affairs and sends a representative to the state board of officers—perhaps a delegate to the national assembly. Every user of a motor car who is willing to be a factor in the fight to establish and improve the new vehicle should write to

MEMBERSHIP

Frank A. Egan.....	New York
John Wilkinson.....	Syracuse
W. K. Cowan.....	Los Angeles, Cal.
John M. Clark.....	Columbus, O.
S. E. Gifford.....	Chicago

SIGN BOARDS

John R. Price.....	Hazleton, Pa.
Edw. W. Barnes.....	Perth Amboy, N. J.
E. W. Roberts.....	Clyde, Ohio
W. J. Morgan.....	Newark, N. J.
B. G. Campbell.....	Milwaukee
G. W. Poley.....	Norristown, Pa.

PRESS

Jos. Estoclet.....	Philadelphia
John C. Wetmore.....	New York
John J. Donovan.....	Boston
Louis R. Smith.....	New York
Arthur N. Jervis.....	New York
C. G. Sinsabough.....	Chicago
W. Horace Lerch.....	Buffalo

the secretary, secure a place on the pioneer list of members, and go about the work of organizing the motor car users in his city, village, town or county. An earnest, hustling enthusiast may easily make himself the senior consul of the local body, and every member will concede his right to the place. There is much truth in the old English proverb, "A bashful dog goes hungry."

A NEW A. M. L. "TRACT"

The league has just published an edition of 30,000 copies of a little sixteen-page leaflet, telling the story of its work and objects. The last page is an application blank. These leaflets can be conveniently carried in one's pocket and it would seem to be the duty of every member of the league to have one for his own information and for the information of his friends. To any inquiring automobilist a copy will be sent on receipt of postal card request, addressed to the secretary.

TO CONSULS

The consuls have begun their work in a splendid way and most of the consuls appointed are giving evidence of their interest in the growth of the league. A few are yet to be heard from. The secretary is waiting.

GOOD ROADS LESSON

Last week brought more new members into the league than any other week since its organization. Perhaps the thrilling newspaper accounts of the endurance contest have impressed the automobilist with the belief that the league needs more help in its departments of good roads and danger signs. The New York World dispatch from Binghamton states that the roads were "so slippery that surprise was expressed that nobody had been killed from machines going down embankments," and that the vehicles "ploughed all day through a turbulent sea of thin mud." All of which is only another reminder that the motor car is not the only thing to be considered in touring over American roads. The wear and tear of machinery, the twisting and grinding of tires, the excessive use of gasoline to cover a given distance, the destructive effects of grit and sand thrown into the working parts of every machine driven over a muddy road, the loss of time and personal fatigue of the motorist, to say nothing of his

frequent exposure to actual peril,—are conditions which may all be modified if not wholly dispelled by the improvement of our roads. It is a subject which appeals most forcefully to the maker and the dealer who seek to make the motor car useful and popular, and with scarcely less force to the user who aims to get a full measure of enjoyment in the use of his vehicle.

The league will publish, during the next year, a small illustrated handbook of practical information on the making of macadam roads, the main object being to show how a smooth and substantial road can be made by the farmer from near-by materials, at a cost not exceeding \$1,800 to \$2,000 per mile.

LETTERS FROM LEAGUE MEMBERS

One day last August when the Independence was being sailed to victory somebody on board tried to direct Captain Barr's attention to what was being done on board the other yacht. "Young man," said Barr, "let us try to sail the ship we're on." Every league member will be pleased to know how the league craft is

LITTLE STORIES

HOW ROCKEFELLER BECAME AN OLDSMOBILIST

It was while riding with Ralph R. Owens, of Cleveland, O., over the storm-beaten Catskill mountain roads in Oldsmobile No. 39 on the endurance run, that the MOTOR AGE representative heard the story of how John D. Rockefeller's antipathy to the automobile was overcome.

"One day an employe of Rockefeller came into my store on Euclid avenue, Cleveland," said Owens, "and asked me to take an Oldsmobile out to give a demonstration to his employer. I immediately got into the runabout and drove up to the Rockefeller home, wondering on the way what I could say or do to convince him that the car was the one thing needed to make him happy ever after. I found the old gentleman walking slowly along one of the driveways, and he smiled genially as I stopped the car beside him.

"Can you give me a little ride in that wagon without spilling us both?" was his first question.

"I assured him that we would get through the ordeal safely, especially if we stayed on the wide driveways. With that, he climbed in, and I started at the decorous speed of 4 miles an hour. I didn't wish to frighten him by fast running, so held the car down to this slow rate for some time. We talked on different topics for a time, my passenger pointing out places of interest along the way and telling of improvements he contemplated making.

"Do you play golf?" he asked, suddenly.

"I admitted that I occasionally indulged a little, and then he said:

"Drive over that way and I'll show you the golf grounds. Can't you go a little faster?"

"I increased the speed to 6 miles an hour and he leaned back and seemed to enjoy it. After a few moments' silence, a thought struck him, and turning to me he said:

"What does it cost to run this machine, young man?"

"That depends on the market price of gasoline," I replied, speeding the car just a little bit more.

"Oh, is that so?" was his response, as a faint flicker of a smile passed over his face and he relapsed into silence.

progressing, and to show that the interest is not growing less. Letters received at headquarters are occasionally published. Below are several recently received:

Honolulu, Hawaii—Will you kindly mail me printed matter relating to membership in the American Motor League? I wish to become a member and work for the organization. Making our numbers felt is the only way we can get fair treatment from legislators. You already have my brother enrolled at Los Angeles.—C. A. COWAN.

Port Chester, N. Y.—Enclosed find check for \$3.50 for dues and silver lapel button. I wish you success in this new organization and if I can render any service to you I will gladly do so.—A. D. FINLEY.

Cleveland, O.—Enclosed please find check for \$2 for membership fee in the A. M. L. I do this because I firmly believe all owners of automobiles should be bonded together for mutual interests and protection.—S. E. KAESTLEN.

Lawrence, Mass.—Enclosed you will find check for \$3 as yearly dues in the American Motor League and year's subscription to MOTOR AGE. As I am much interested in the success of the enterprise I shall endeavor to get a number of the club members to become members of the league, believing it will be of as much benefit to automo-

bilists as the L. A. W. was to the wheelmen. If there is anything further I can do just command and do not forget that when the league's friends are touring this way we can take care of all their needs.—FRED ELLIS.

Peru, Ill.—The work for good roads and the signs to be placed, etc., is certainly very commendable and I shall use my influence to have others join the league. Please mail me the sterling silver lapel button for which I enclose check.—W. K. HOAGLAND.

Plattsburgh, Pa.—Several days ago I sent my subscription to the league. Since looking the matter over I am even more pleased with it and wish you would send me a bunch of the pamphlets so that I can assist in getting recruits. I shall be in New York soon and shall take the liberty of calling upon you.—DR. JOHN A. HAWKINS.

Schenectady, N. Y.—I will be pleased to become a member of the American Motor League and I can assure you that I will be pleased to do what I can to extend its work and growth. I enclose application blank and check for yearly dues in the American Motor League and for one gold plated lapel button.—C. STUART V. VROOMAN.

Buffalo, N. Y.—I am of firm belief that a league of this kind is a good protection for its members.—J. H. BETTS.

OF AUTOMOBILING

welcome finish to the first stage of the journey.

The trip was made in a leisurely manner, frequent stops being made at the towns along the way. At Dowagiac, Mich., considerable difficulty was encountered in finding a place to store the car over night, as the livery stables were afraid to take it in. The rain was falling steadily when this town was reached, and it was only after an hour or more of hunting that a shed in a churchyard was found open. The car was run into this shed, a lock bought at a nearby hardware store, and the key carried in Tarrant's pocket until the next morning. When the two presented themselves at the hotel and asked for a room, the clerk looked suspiciously at the drenched and bedraggled pair, and then said he "guessed he could find a place for them to sleep." Leaving this rather inhospitable place early in the morning, the automobilists thought they could get breakfast at Paw Paw, but they were disappointed. This town was reached at 8 o'clock and at all the hotels they were told it was too late for breakfast and too early for dinner. The manager of the Woman's Exchange finally took pity on them and gave them some coffee, which happened to be left over from breakfast. Food, however, was not to be had. Along this part of the route the sand roads were so deep and the grades so steep that as a precaution against chain breaking and consequent disaster, De Fries carried a log and walked up the hills in the rear of the car, ready to "chuck" it, if necessary to stop it from running away down hill.

At Battle Creek one cylinder refused to work, and the local repair shop was hunted up. The door was too small to admit the big car so the repairs had to be done in a nearby livery barn. After fixing the engine, the machinist, in his zeal to have the car in perfect condition, took it all apart, and had the pieces scattered over the premises when the motorists dropped in to see how work was progressing. As they were in a hurry to get started the prospect was not pleasing, and fully 4 hours was required to get the machinery together again.

After this overhauling the car ran without further trouble into Ann Arbor, the roads being fairly good.



"When we arrived at the golf grounds I listened to an interesting dissertation on golf and then we started back to the house. At different points we slowed up while he explained what changes he expected to make on the property, so that I became fairly well posted on the improvements contemplated during the coming year. On the long, straight stretches of road I drove at the reckless gait of 6 miles an hour and my passenger made not the slightest objection.

"When we stopped in front of the house, the old man dismounted, thanked me for the ride, and dismissed me with a wave of his hand. Not a word had been said about purchasing a car. I had not even been asked the price. I felt sure the ride had been enjoyed, and I thought it best to leave out the commercial feature, and let the car do its own missionary work.

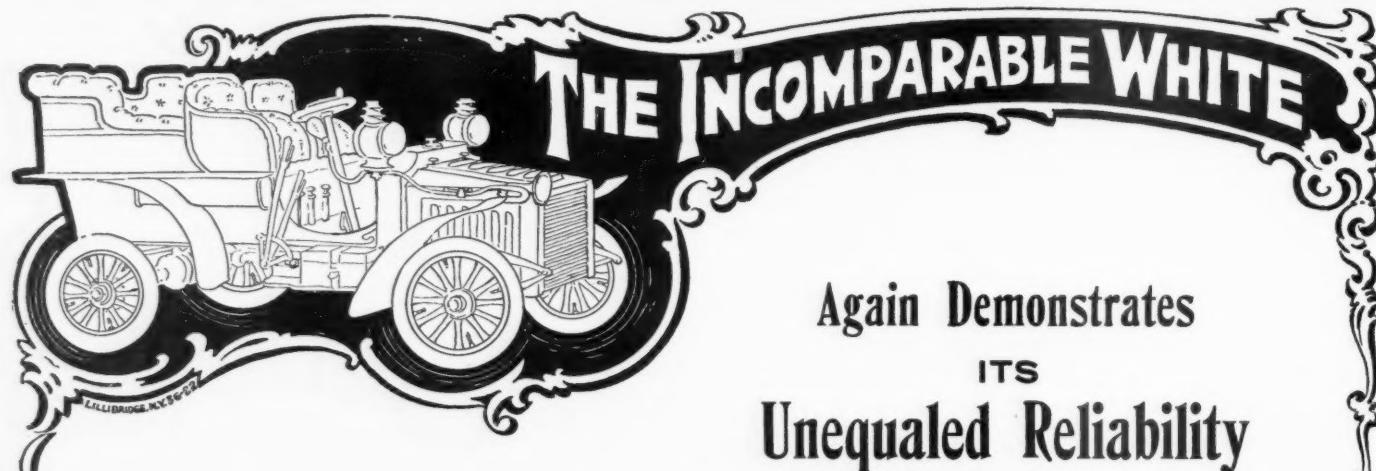
"A few days later the man who had first come to me about the car, came in again and gave me an order to have one sent up to the house.

"What did Mr. Rockefeller think of his ride?" I asked.

"Oh, he said he liked it. He was pleased because you didn't ask him to buy, but took him riding just as if you did not care whether you sold him a car or not. He has come to the conclusion that an automobile is not such a dangerous thing after all."

TOURING IN SANDY MICHIGAN

Sandy Michigan proved an eventful if not an entirely pleasant touring section to Robert Tarrant, Jr., secretary of the Chicago Automobile Club, who, accompanied by Carter T. De Fries, the assistant secretary of the club, recently drove in a Stearns from Chicago to the football town of Ann Arbor. The two men started from the club house on Michigan avenue at 4 o'clock in the morning. The run to La Porte, Ind., was without incident, save that they were thoroughly benumbed by the cold, and the hot breakfast at La Porte was a



In the New York to Pittsburg Endurance Run Just Completed

White Steam Touring Cars

repeated the successes achieved in every previous endurance and reliability contest. Of the NINE cars which arrived at the various garages each night by midnight (of the THIRTY-FOUR which started), TWO WERE WHITES. Webb Jay's WHITE was first to arrive at Binghamton, Buffalo, Youngstown and Pittsburg, and the second at Cleveland and Erie. Paul Deming's WHITE finished among the leaders each day, demonstrating that the WHITE, in addition to being the most reliable car ever designed, is faster than more costly gasoline machines. IN ADDITION to the two competing cars mentioned above, a WHITE pilot car preceded the contestants and another WHITE, driven by an amateur, accompanied them, making

Four White Cars to complete without mishap the arduous journey, a **Record Unapproached** by any other machine.



THE WHITE MADE A SIMILAR RECORD IN THE RECENT ENGLISH RELIABILITY TRIALS.

In the one thousand mile trip extending over a period of eight days, one WHITE made seven "non-stop" or perfect runs and one run with a loss of less than five marks. The other WHITE car made five perfect runs, two runs with losses of less than five marks and one run with a loss of slightly over five marks. In the hill-climbing contest the WHITE climbed a grade averaging 8.5 per cent., 3,960 feet long, at a speed of 13.63 miles per hour. In the speed contest the WHITE traveled at 33.58 miles per hour with full equipment and full complement of passengers.

These performances of the White were superior to those of the great majority of the foreign cars costing three or four times as much as the White.

WHITE SEWING MACHINE CO., Cleveland, Ohio.

NEW YORK: 215 West 48th Street.

DETROIT: 212 Woodward Avenue.

BOSTON: 507 Tremont Street.

LONDON: 35-37 King St., Regent St.

SAN FRANCISCO: 300 Post Street.



The Refinement of Good Taste

The elegance of the appointments of a Peerless Car is one of the indications of its sterling worth.

\$2,800 to

\$11,000

Peerless Direct Drive Touring Cars

are the result of years of careful study and practical experience. Down to the smallest detail, there is a positive reason for each step in their construction.

Our illustrated catalogue tells why the Peerless is the costliest Car to build, and the most satisfactory to buy.

Photogravure of above illustration, size 14x22 inches, "The Peerless Girl II," suitable for framing, sent postpaid for 10c.
PEERLESS MOTOR CAR COMPANY, Cleveland, Ohio, U. S. A.

ENDURANCE

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WHEN RAILROADS STOPPED
THE AUTOMOBILE WENT ON

1903 ENDURANCE RUN
IS NOW HISTORY

THE RECORDS SHOW FOR
PIERCE
PRODUCTS AS FOLLOWS:

No. 15 Pierce Stanhope made every control and Second place

No. 14 Pierce Arrow Car made every control and fourth place

Arrow Pilot Car made every control
These are all the PIERCE entries

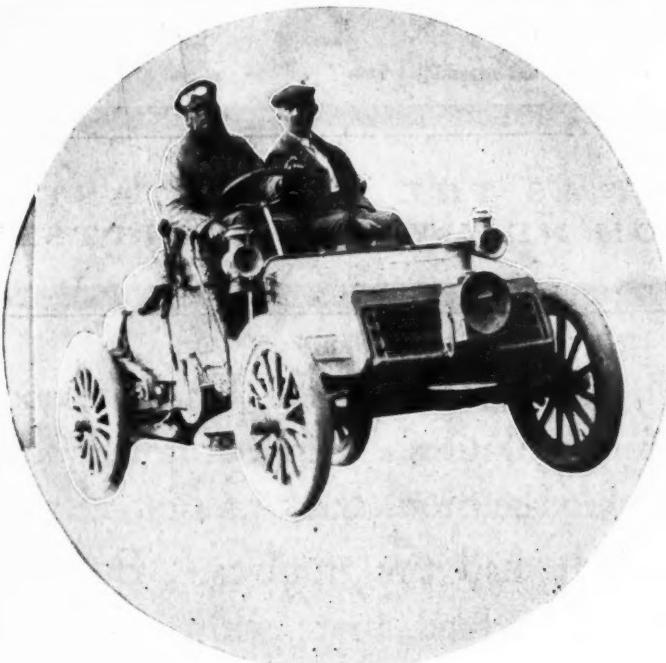
IF SUCH CARS ARE WHAT YOU WANT,
FULL PARTICULARS CAN BE HAD OF
ALL OUR AGENTS OR BY ADDRESSING

THE GEORGE N. PIERCE CO.

BUFFALO
NEW YORK

Also Makers of PIERCE CYCLES

PACKARD SURETY



The equal of the Endurance Contest which closed in Pittsburgh last week has never been seen in this country, and European Contests could not produce similar conditions if they wanted to.

The nearest approach to it was the New York-Buffalo Run of 1901 in which the Packard Cars won **FOUR FIRST-CLASS CERTIFICATES**.

The New York-Boston event of last year which added five first-class certificates to the credit of the Packard was comparatively easy.

One hundred mile non-stop runs have contributed four of their highest honors, and wherever our cars have been used—in our Trans-Continental journey, in all leading endurance contests, in the hands of users, or last but by no means least on the race track—the results have been perfectly uniform.

It was this fact that caused us to limit ourselves in the New York-Pittsburgh Contest to one entry, and our confidence in our machines after 5,000 miles of use, to make this one entry **OLD PACIFIC**.

The same motor and running gear that took this car over the Sierras and Rocky Mountains ascended to the summit of the Catskills, and proudly carried the old battle-scarred body into the front rank at the finish in Pittsburgh.

The record of Old Pacific in this contest will be well worth watching, for it is not that of a new machine in the pink of condition, but of a car that has seen more abuse four times over than falls ordinarily to the lot of the average machine in the whole course of its existence.

It should be a matter of simple arithmetic for you to calculate the satisfaction which you would obtain from a new Packard Motor Car. "ASK THE MAN WHO OWNS ONE."

PACKARD MOTOR CAR COMPANY, :: DETROIT, MICH.

MEMBERS ASSOCIATION LICENSED AUTOMOBILE MANUFACTURERS

FOLLOW THE TRAIL
of the
STEARNS

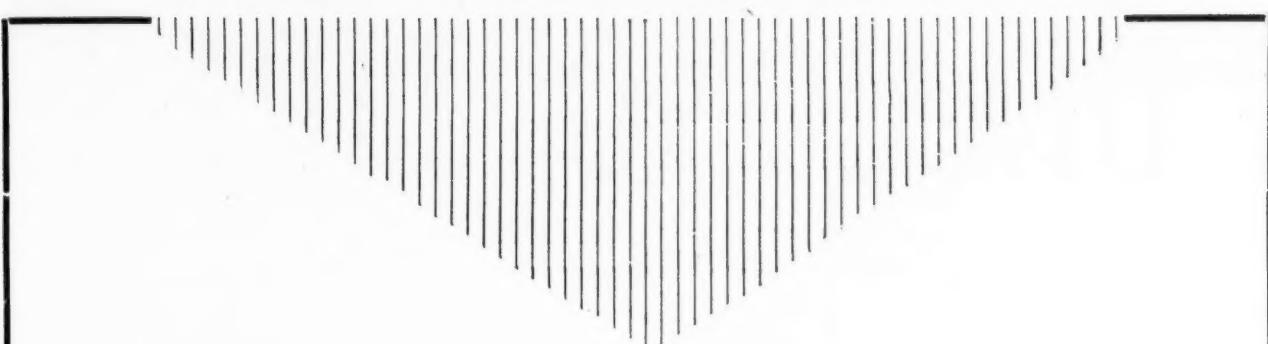
JUST AS THE CONTESTANTS DID
FROM NEW YORK TO PITTSBURG

Pine Hill, third, started 34th. Unadilla, noon control, first by forty minutes. Binghamton, sixth; delayed by skidding in the mud. Elmira, first, at noon control. Bath, second; had tire troubles. Buffalo, seventh. Erie, first. Cleveland, first; waited forty minutes for first trailer. Youngstown, first, but in garage, second by courtesy. First at Avon, ten miles from Pittsburgh garage, by an hour; accident on road let us into Pittsburgh seventh. For full data, address

THE F. B. STEARNS CO.
CLEVELAND, OHIO, & U. S. A.

P. S.—We have arranged to start for New York over the same route (as soon as the examiners release the car) and will endeavor to make the run in one-half the time taken for the outward run—in other words, we will make two controls each day. We will be glad to have any other contesting car or manufacturer attempt to duplicate this feat.

THE *Locomobile* IN THE ENDURANCE RUN



MR. and MRS. RIKER RETURN OVER THE ROAD FROM PITTSBURG

The Endurance Run Locomobile (our only entry) is now—October 23—returning from Pittsburg to Bridgeport, the Riker party having left at noon October 20. A comfortable touring speed is being maintained; no records are sought. To show the condition of the car after its racking trial, it may be stated that the ninety-six miles between Buffalo and Erie were covered in four hours running time.

Locomobiles Are Good From All Points of View...

Better investigate our 1903 models. Write factory or any Branch Office.

The *Locomobile* Company of America
MEMBERS OF THE ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS.

Bridgeport, Connecticut

LIST OF BRANCH OFFICES:

NEW YORK: Broadway, corner of 76th St. BRIDGEPORT: Factory at Seaside Park.
PHILADELPHIA: 249 N. Broad St. BOSTON: 13 Berkeley St.
CHICAGO: 1354 Michigan Ave.

**5½
Mills
per
Mile**

**5½
Mills
per
Mile**

The Unequaled Record of **DIAMOND TIRES**

The Best American Clincher

In the recent Endurance Run there were $12\frac{1}{2}$ SETS OF DIAMOND TIRES on the 25 cars which arrived in Pittsburgh—50 PER CENT OF THE WHOLE. Please notice. From Weehawken to Pittsburgh is 797 miles. These $12\frac{1}{2}$ sets of tires, therefore, traveled a total of

**9962.5
Miles**

at a
total average
tire cost of
but

**5½ Mills
Per Mile**

It is a record which no other make of tire in the run can approach. It is exceeded only by THE RECORDS OF DIAMOND TIRES IN USUAL SERVICE UNDER NORMAL CONDITIONS.

**5½
Mills
per
Mile**

**The Diamond Rubber Co.
AKRON, OHIO**

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PHILADELPHIA, 304-306 N.
Broad St.
BOSTON, 174 Columbus Ave.
BUFFALO, 41 Court St.

DETROIT, 310 Woodward Ave.
CLEVELAND, 323 Huron St.
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CHICAGO, 167-169 Lake St.
DENVER, 1655 Blake St.
SAN FRANCISCO, 8 Beale St.

**5½
Mills
per
Mile**

UNEQUALED PERFORMANCE

....OF A....

**24 Horse Power
Gasoline**

Touring Car

ON OCTOBER 1st a **Columbia 24-Horsepower Gasoline Touring Car** arrived in New York from Chicago, having covered **1,177 Miles in 76 Hours** of continuous running, establishing the most important and valuable of all automobile records. This wonderful run, which was made without a stop for repairs of any kind other than mending a single puncture, so far surpasses the best achievement of any other automobile, American-made or foreign, that comparisons are out of the question. Three unsuccessful attempts have since been made to break this record.

In the **New York-Pittsburg endurance run** the same **Columbia** car—a regular stock model—covered the entire distance of 793 miles between New York and Pittsburg in **54 hours** running time, beating its nearest competitor among the twenty-three other "survivors" by **5 hours and 25 minutes**. The **Columbia** made the best time between five of the eight night controls, was the first gasoline car to reach Pittsburg, and scored the highest number of points of any car of its class. During the entire run the car, which carried the heaviest load of any car in the contest (five persons and 100 pounds "ballast" to meet the regulations), moved steadily on in spite of weather and road conditions which compelled many of the contestants to fall days behind the schedule and forced ten of them to withdraw permanently. Previous to making the Chicago-New York record the car had been run from New York to Chicago, so that its arrival at Pittsburg completed a practically continuous run of 3,107 miles without repairs to the engine or any part of the driving mechanism.

At a little distance away from the actual performance it is beginning to be appreciated that the record of 76 hours from Chicago to New York, which was made last week, is the best long distance record ever made and the most valuable one. . . . It is continuous running that tests the sturdy qualities of a car to the utmost.

—New York Sun, Oct. 4.

What More is Needed to Demonstrate the Superiority of Columbia Design and Construction?

The price of the Columbia 4-cylinder 24-horsepower car is \$5,000, and it contains the best value of any gasoline car on the market, none other approaching it for ease of operation and control, reliability of action, accessibility of parts and beauty of finish.

**Catalogue of 20 different Columbia Electric and Gasoline Models
will be sent on request**

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New York Branch: 134-136-138 West 39th St.

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Member Licensed Association of Automobile Manufacturers.

NOTICE

TO MANUFACTURERS, DEALERS, IMPORTERS,
AGENTS AND USERS OF

Gasoline Automobiles

United States Letters Patent No. **549,160**, granted to George B. Selden, November 5, 1895, controls broadly all gasoline automobiles which are accepted as commercially practical. Licenses under this patent have been secured from the owners by the following named manufacturers and importers:

Electric Vehicle Co.	Pope Motor Car Co.
The Winton Motor Carriage Co.	The J. Stevens Arms & Tool Co.
Packard Motor Car Co.	H. H. Franklin Mfg. Co.
Olds Motor Works	Charron, Girardot & Voigt Co. of America (Smith & Mabley)
Knox Automobile Co.	The Commercial Motor Co.
The Haynes-Apperson Co.	Berg Automobile Co.
The Autocar Co.	Cadillac Automobile Co.
The George N. Pierce Co.	Northern Mfg. Co.
Apperson Bros. Automobile Co.	Pope-Robinson Co.
Searchmont Automobile Co.	The Kirk Mfg. Co.
Locomobile Co. of America	Elmore Mfg. Co.
The Peerless Motor Car Co.	E. R. Thomas Motor Co.
U. S. Long Distance Automobile Co.	Buffalo Gasoline Motor Co.
Waltham Manufacturing Co.	
	The F. B. Stearns Company.

These manufacturers are pioneers in this industry and have commercialized the gasoline vehicle by many years of development and at great cost. They are the owners of upwards of four hundred United States Patents, covering many of the most important improvements and details of manufacture. Both the basic Selden patent and all other patents owned as aforesaid will be enforced against all infringers.

No other manufacturers or importers are authorized to make or sell gasoline automobiles, and any person making, selling or using such machines made or sold by any unlicensed manufacturers or importers will be liable to prosecution for infringement.

Association of Licensed Automobile Mfrs.
No. 7 EAST 42d STREET, NEW YORK

NOTICE!

To Dealers, Importers,
Agents and Users of our
Gasoline Automobiles

We will Protect you Against any Prosecution for alleged Infringements of Patents

Regarding alleged Infringement of the Selden Patent, we beg to quote the well-known Patent Attorneys, Messrs. Parker & Burton: "The Selden patent is not a broad one, and if it was it is anticipated. It does not cover a practicable machine, no practicable machine can be made from it and never was so far as we can ascertain. It relates to that form of carriage called a FORE CARRIAGE. None of that type has ever been in use, all have been failures. No court in the United States has ever decided in favor of the patent on the merits of the case, all it has ever done was to record a prior agreement between parties."

We are the pioneers of the Gasoline Automobile. Our Mr. Ford made the First Gasoline Automobile in Detroit and the third in the United States. His machine, made in 1893, two years previous to the granting of the Selden patent Nov. 5, 1895, is still in use. Our Mr. Ford also built the famous "999" Gasoline Automobile, which was driven by Barney Oldfield in New York on July 25, 1903, a mile in 55 4-5 seconds on a circular track, which is the world's record.

Mr. Ford, driving his own machine, beat Mr. Winton at Grosse Point Track in 1901. We have always been winners.

WRITE US FOR CATALOGUE

Ford Motor Company
688-692 Mack Avenue
Detroit, Mich.

The Peculiar Excellence of
Construction of

American Dunlop Tires

Automobiles
Carriages

Motor-
bicycles
Bicycles



has made them the choice of discriminating buyers the world over. Every detail has been worked out to the highest degree. Everything that enters into the tire is of selected material and subjected to the closest scrutiny in every process of manufacture, with the result that American Dunlop Tires have made a name of their own that is synonymous with tire perfection. Every wide-awake merchant in any land can profit himself and satisfy his customers by handling

AMERICAN DUNLOPS

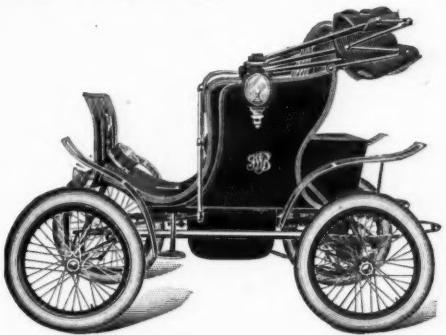
Manufactured by

Hartford Rubber Works Company

Hartford, Connecticut, U. S. A.

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THE LIGHTEST
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MOST DURABLE
MOST EFFICIENT
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ABSOLUTELY SAFE
PERFECTLY CLEAN
BEST TO RIDE
MOST ECONOMICAL
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THE BAKER ELECTRIC

Attractive in Rich Finish and Design. & Simply Manipulated. & Always Satisfactory.
A Carriage Any Lady Can Drive.

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THE BAKER MOTOR VEHICLE CO., Cleveland, Ohio

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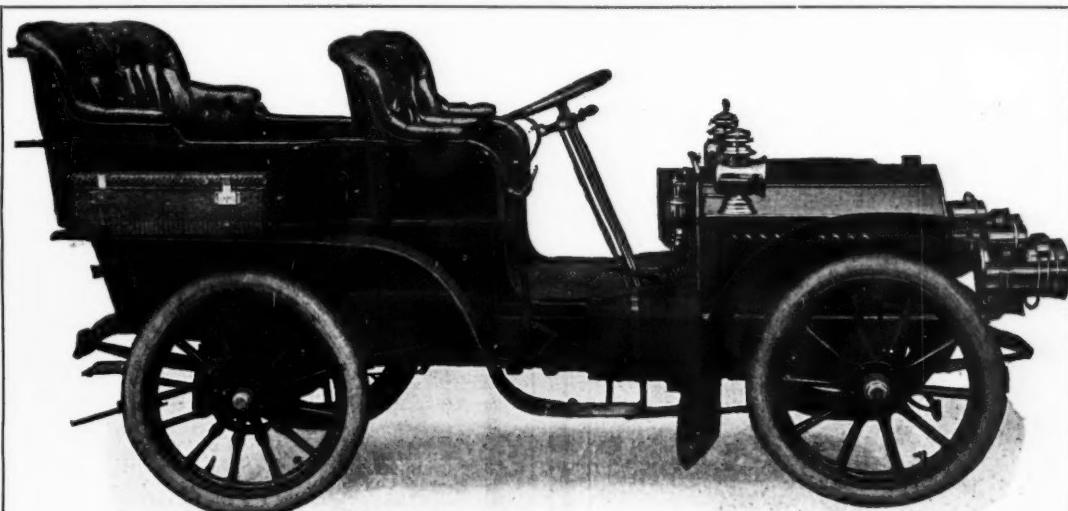
Hold More Records than any Other Make in the World

Oldfield
Defeated by
DARRACQ CAR
at Detroit and
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See Our
New 24 H. P.
1904 Model

15
Cups and Prizes
Won This
Season by
DARRACQ CARS

Our New Tour-
ing Cars are the
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24 H. P. Four Cylinder Touring Car

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1904 CRESTMObILE

\$750 For Two Persons • For Four Persons \$850

WILL HAVE

WHEEL STEER—STANDARD TRACK
Wide Body With Improved Tonneau

The Crest is an Air-Cooled Car and a Good One.

Any one claiming that a **properly** constructed air-cooled motor is not the equal of a water-cooled motor is either ignorant of the advance of the art or is unreasonably prejudiced.

The Crest Proves it by its Records.

East Liverpool, Ohio, October 17, 1903.
W. C. Adams, Esq., Cambridge, Mass.
Dear Sir: Your favor of the 14th inst. received and in reply beg to say that my machine is now giving perfect satisfaction and I am more than surprised as to its hill climbing ability. I have been over some hills that I had no idea but that the machine would stop and I should have to let it run backwards and take some other route, but in nearly every instance it climbed the hills without half the power on. Some other new machines bearing great recommendations, costing a half more than mine and called ten horse power, have been sent back to the factory because they won't go up hills that my machine will. Personally I have not yet seen a machine that I would exchange for my Model "D" Crest Machine.
Yours very truly,
A. W. SCOTT.

WHEN YOU BUY A CREST YOU
GET THE SUCCESSFUL PRODUCT
OF ONE OF THE OLDEST LIGHT
CAR BUILDERS IN AMERICA

The New Crest Factory will Make in 1904
1000 Crestmobiles

The Car That Does It



MODEL D 1903

CREST MFG. CO.
CAMBRIDGE, MASS.



The Oldsmobile

LIGHT DELIVERY WAGON

A practical vehicle designed to meet the demand for rapid delivery of rush orders. Attractive in appearance and serviceable in construction. Equally as good for winter as for summer. More economical than the horse drawn wagon and will cover twice the ground in half the time.

Designed on the same principles as the Standard Oldsmobile Runabout. Simple, safe and very easy to operate.

Price \$850.00

Any of the following selling agents will show you the Oldsmobile line:

Albany, N. Y.: Automobile Storage & Trading Co.
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Binghamton, N. Y.: R. W. Whipple.
Boston, Mass.: Oldsmobile Co. of New England.
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Victoria: Hall & Warden, Melbourne.
Queensland: James Smith & Sons, Brisbane.
Australia: South Australia: Duncan & Fraser, Adelaide.
West Australia: American Motor Car & Vehicle Co., Fremantle.

New Zealand: W. A. Ryan & Co., Ltd., Auckland.
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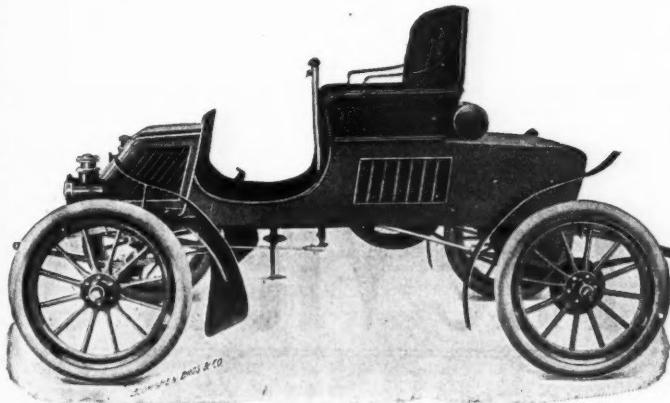
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Neither Rain Nor Mud

stopped the most practical cars in the New York to Pittsburg Endurance Contest. Through floods that stopped trains, and mud that absolutely prohibited horse driving, the

Rambler[®] Touring Car



continued on its way, reported on time at every control, proved itself capable of accomplishing the same work as the \$5000 kind, and often doing it better.

**It Was the Only Machine in its Class
to Earn a First-Class Certificate**

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was made by only three of the winning machines in the New York-Pittsburg Endurance Contest. Two of these machines were equipped with :: :: ::

GOODRICH CLINCHER AUTOMOBILE TIRES

Your chances for a clean score of automobile comfort and contentment will be best when equipped with

:: :: GOODRICH TIRES :: ::

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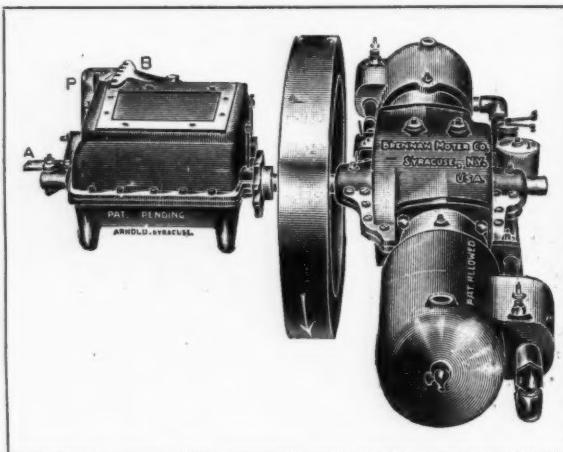
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Investigate THE BRENNAN, the leading American Motor

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WE WILL GIVE
YOU THE
NAMES



Chillicothe, O., Sept. 11, '03.
Brennan Mfg. Co.,
Syracuse, N. Y.

Gentlemen: We wish to tell you of our success Labor Day. In the Auto Races at Greenfield, Ohio, our car won all the events, we beating the Rambler and several other machines which were stripped for action. We had no idea of entering races until we pulled in the town, and did it merely for the fun of the thing and were not prepared, but went in and won all the events, of course netting us a nice little bunch of prize money.

Very truly yours,
THE MOTOR STORAGE & MFG. CO.
By B. A. GRAMM, Gen'l Mgr.

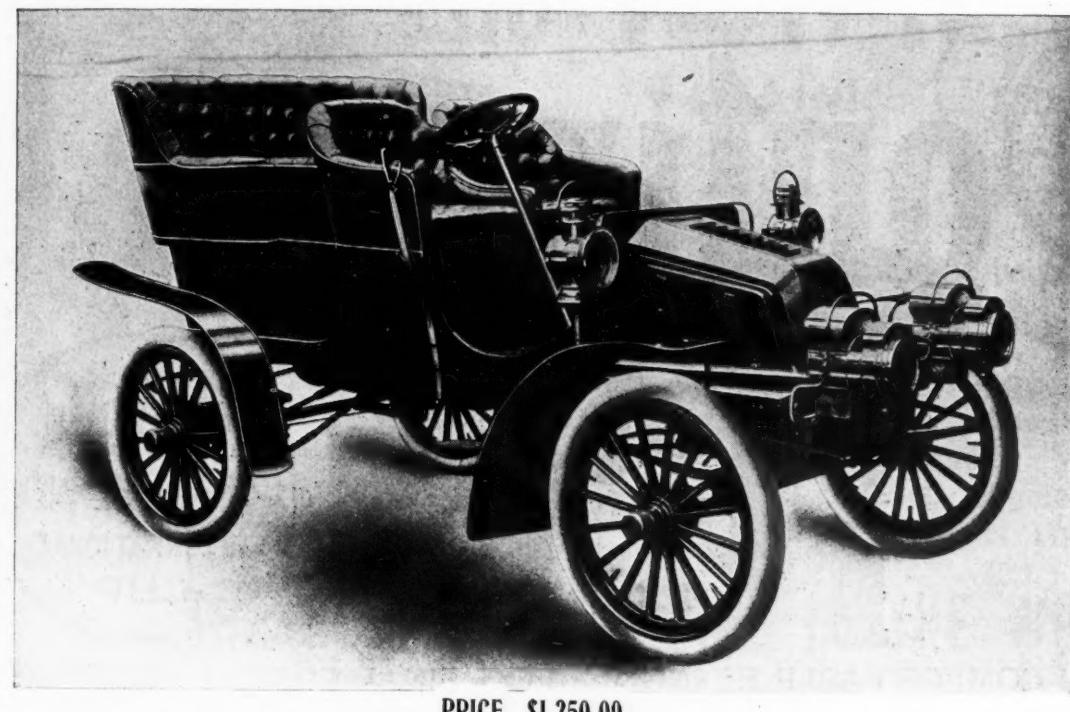
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THEY SATISFY
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SATISFY
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Built in Sizes from Four to Thirty Horse-Power
Special Fifteen and Twenty Horse-Power Patterns with Transmission Gear Attached

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BRENNAN MOTOR CO., - Syracuse, N. Y.

Both Fredonias Came Through



PRICE, \$1,250.00

the greatest flood in
the history of New
York State and fin-
ished

The Endurance Run

at Pittsburg on time
and without loss of
efficiency points.

Both the Fredonia
Tonneau No. 2 and
the 9-horsepower Run-
about are stayers in
any kind of use.

Our run demon-
strated this beyond
peradventure of a
doubt.

FREDONIA MANUFACTURING CO., Youngstown, Ohio, U.S.A.

Chicago Agent: Edmond F. Dodge, of P. G. Dodge & Co., 2116 Lumber Street.
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ANNOUNCEMENT

ORIENT BUCKBOARD
ORIENT BUCKBOARD

ORIENT BUCKBOARD NEW MODEL OF 1904

Greatly improved throughout. Two speeds ahead; will climb all grades up to 25 per cent. Crank starting. Additional springs to body, and spring cushions and back—rides like a parlor car. Noise reduced 75 per cent; wider seat. All speeds from 4 to 30 miles per hour. The most practical and best selling automobile in the world.

PRICE, \$425

Orders for the new Buckboards will be received and entered on and after November 1st. Shipments will begin January 15th. :: Write for advance circular and agents' terms. :: Secure the agency for your town promptly; do not delay until someone else has it.

WALTHAM MFG. CO., Waltham, Mass.

Members of the Association of Licensed Automobile Manufacturers.

For 1904



Continental Tires



and COMFORTABLE RIDING at a LESS FINAL COST.
Send for Price List.

Factory: Hanover, Germany.

The Continental Caoutchouc Company,

American Office: 298 Broadway, New York
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For
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Can be
Readily Applied
to Any Car

The operator mounts the car, pulls a small valve lever, throws in the clutch, and the car moves off.

No more LAME or BROKEN ARMS from turning hand cranks.

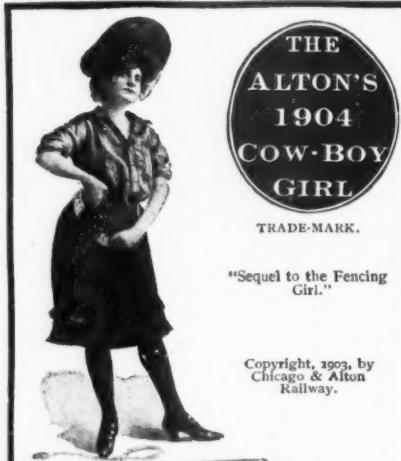
The Starter is simple, strong, and will not get out of order.

A child can start the largest car.

The Steel Ball Company

Telephone, West 1294

832-840 Austin Avenue, - Chicago



"Sequel to the Fencing Girl."

Copyright, 1903, by
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Railway.

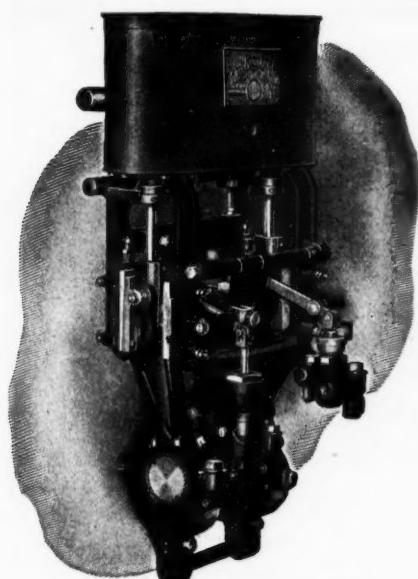
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THE "NEW MASON" Model C

The "NEW MASON"

(Model "C")

includes all of the many excellencies of the original Mason Engine, with additional features, which give it a still greater lead ahead of all other steam auto engines.

Every part of the Mason Engine has been critically gone over, and wherever possible, improved, strengthened and perfected in every smallest detail.

We have made, operated and repaired more steam auto engines than any other concern, and have concentrated in the "Model C" all

of the experience gained by this wide observation of all other engines. We do not claim that
The Mason "Model C" is a perfect engine, but do positively affirm, and are ready to back up our affirmation, that it is, from every standpoint,

THE BEST AUTO ENGINE IN THE WORLD.

Our "Model C" catalogue will tell you all about this engine, and prove interesting to every autoist. It will be a pleasure to mail you a copy. Send postal card for it to-day.

A full line of parts for all Mason Engines will be found at 147 Queen Victoria St., London, England.

THE MASON REGULATOR COMPANY, - - - 158 Summer Street, BOSTON, MASS.

Kindly mention this publication in writing.

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IS SYNONYMOUS WITH

QUALITY in MOTORS

Single Chain Drive Transmission.

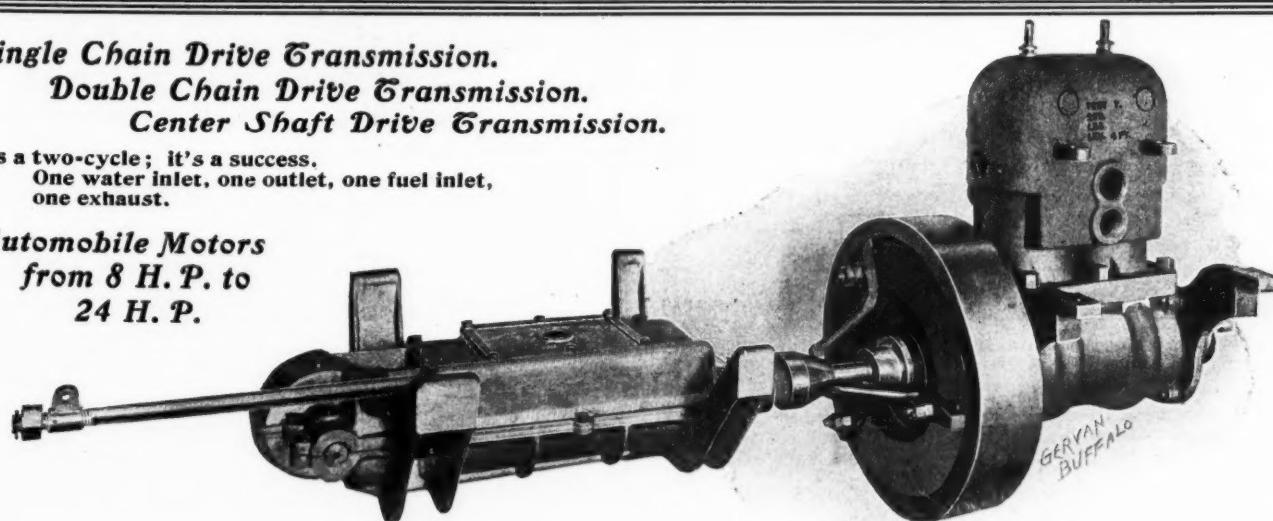
Double Chain Drive Transmission.

Center Shaft Drive Transmission.

It's a two-cycle; it's a success.

One water inlet, one outlet, one fuel inlet,
one exhaust.

Automobile Motors
from 8 H. P. to
24 H. P.



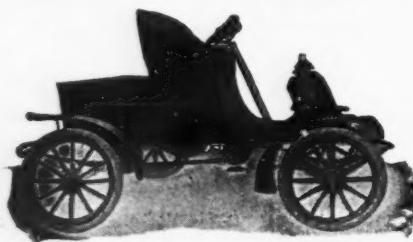
Single Chain Drive Transmission and Clutch Coupled to Motor

For Prices and Points of Merit, Address

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Doctors and Business Men! Investigate

THE ELMORE



Model 7, \$800

Tonneau Touring Car, Model 8, \$1400

UNEXCELLED FOR SIMPLICITY AND RELIABILITY

Important Facts

The two-cylinder Elmore motor has fewer parts than the single cylinder of any other type. Either engine will propel the car should the other be cut out. Charge the battery from the dynamo while running the car. Practical test of over three years' manufacture.

Two first-class certificates in New York-Boston Endurance Run. Used in 1,000-mile tours without trouble.

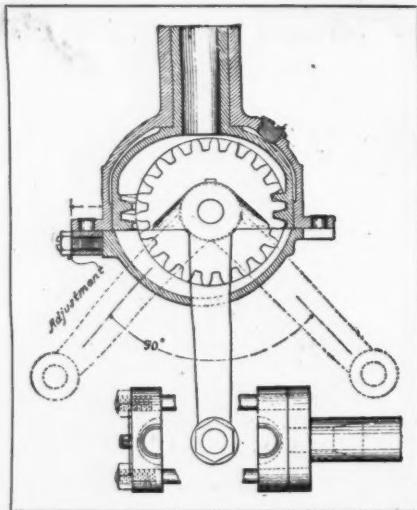
Write Us for Catalog and Testimonials.

Elmore Manufacturing Co.

Member of Association of Licensed Automobile Manufacturers

CLYDE, OHIO

Tested Our Steering Gears



No guess work after going through the Endurance Run. The Fredonia Mfg. Co., Youngstown, Ohio, telegraphed us Oct. 21st, as follows:

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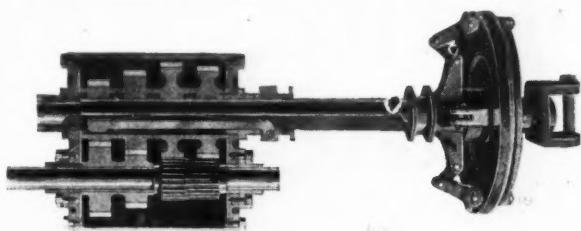


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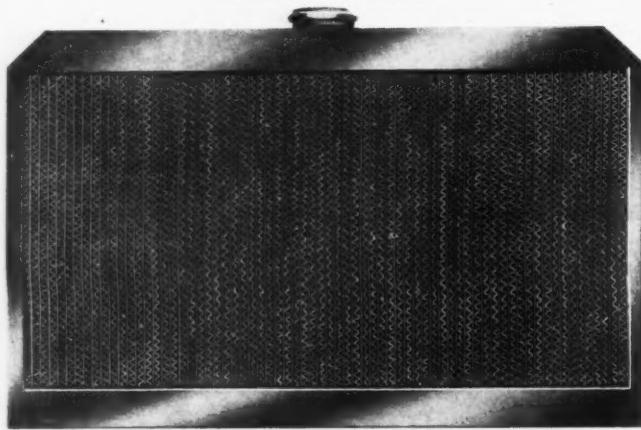


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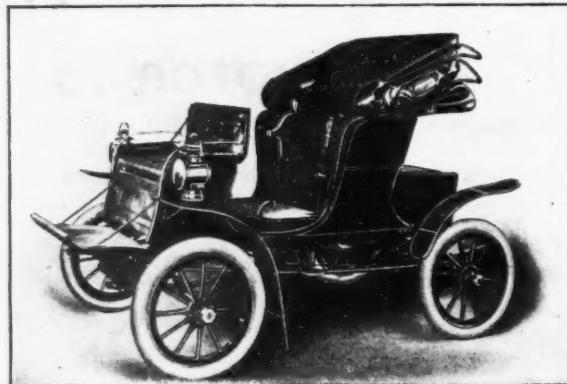
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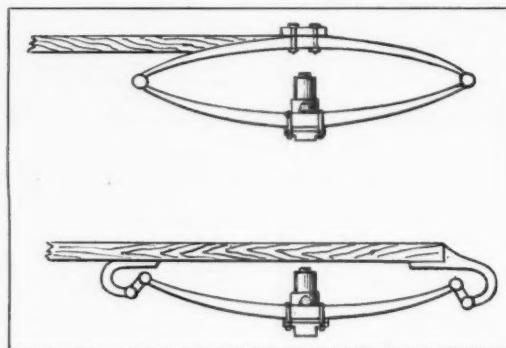
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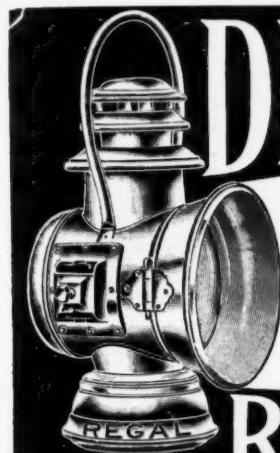
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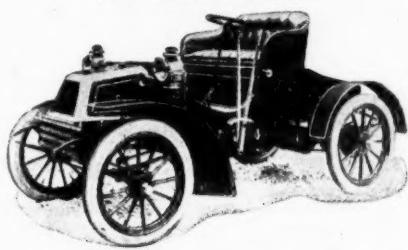
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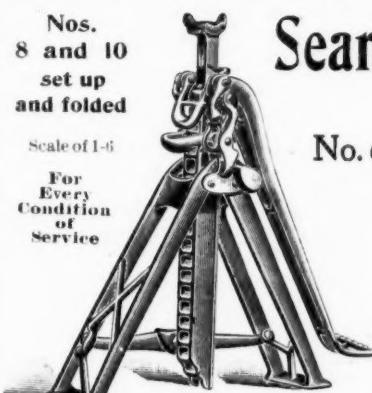
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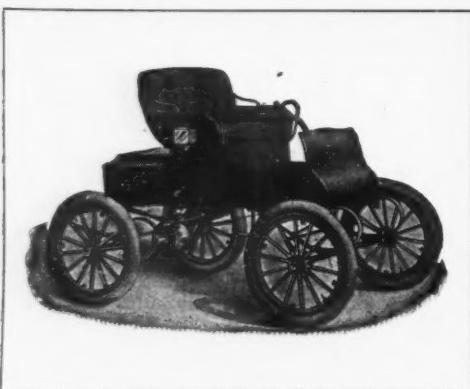
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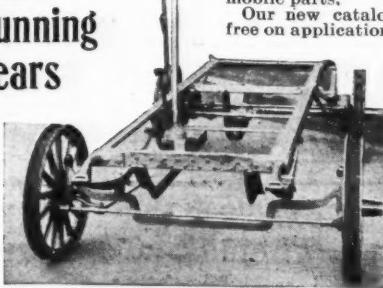
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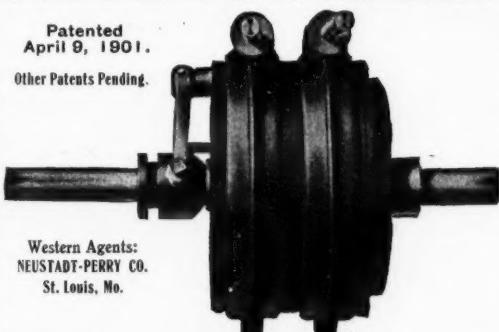
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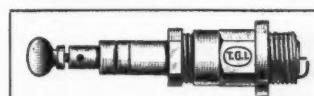
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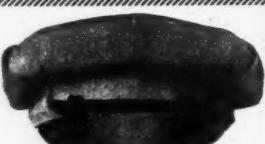
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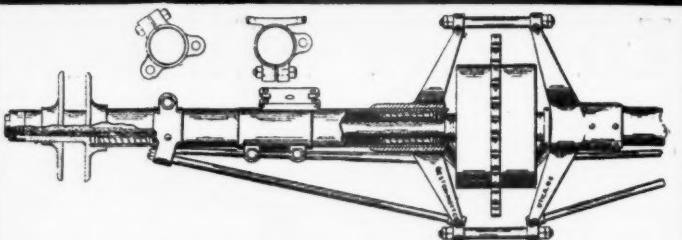
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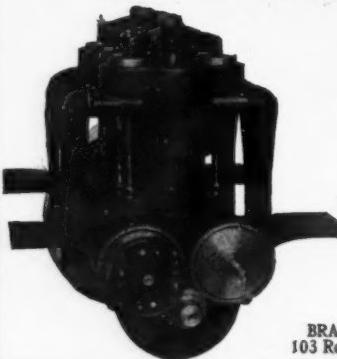
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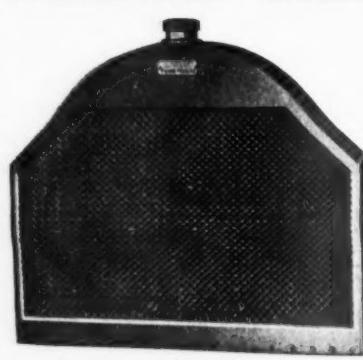
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Are the Standard.
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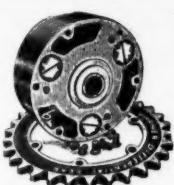


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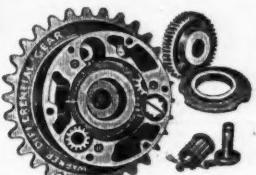
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987

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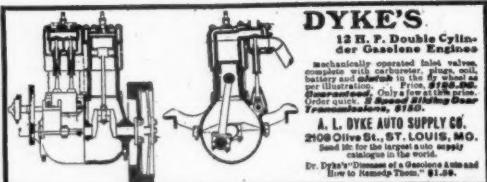
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OLDFIELD'S RECORD AT COLUMBUS, OHIO, JULY 4, 1903

1st mile	56 2-5	One Mile	:56 2-5
2nd "	59	Two Miles	1:55 2-5
3rd "	59 3-5	Three Miles	2:55
4th "	1:00	Four Miles	3:55
5th "	59 3-5	Five Miles	4:54 3-5
6th "	59 3-5	Six Miles	5:54 1-5
7th "	1:01	Seven Miles	6:55 1-5
8th "	1:00	Eight Miles	7:55 1-5
9th "	59 3-5	Nine Miles	8:54 4-5
10th "	1:00	Ten Miles	9:54 4-5
TOTAL	9:54 4-5	Mile Average	:59 4-5

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Are you interested in the purchase of a thoroughly reliable and high grade Touring Car? Read the following letter:



Milwaukee, August 28th, 1903.

Bates-Odenbrett Automobile Company,
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Gentlemen:—In response to your inquiry, wish to say that I consider my recently purchased 20-horse power Winton Touring Car **par excellence**. I have already driven the car over thirteen hundred miles and it is running better every day. For strength of construction, ease of manipulation and adjustment, hill climbing and smoothness in running, it cannot be surpassed.

I took a party of five to the Wisconsin Dells and back last week, a distance of 264 miles, over the worst sand roads and hills I have ever seen. The trip via Columbus and Portage was made in the day, the odometer registering 121 miles. The return trip by way of Baraboo and Madison was also accomplished with ease in the day, the meter registering 143 miles. During the entire trip the motor never missed fire once and no adjustment of the machinery was necessary. It may interest you to know, and what proved to me a great surprise, that we did not have to replenish the water supply during the entire trip, which was made in the hottest days, on Aug. 18 and 20.

Before purchasing my touring car I was told that water-cooled machines were very apt to become overheated on long runs. If they do, the Winton is certainly an exception.

Wishing the Winton the success it deserves, I remain,

Yours very truly,

A. BERGENTHAL.

The 20-horse power Winton combines more features of genuine excellence than any other high grade car manufactured or sold in America. Price is \$2,500. We can quote prompt deliveries. * * * * Send for catalogue or visit nearest Agent

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